Non-State Global Environmental Governance

The Emergence and Effectiveness of Forest and Fisheries Certification Schemes

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Preface and Acknowledgements

This dissertation grew out of my interest in international forest politics and environmental protection in forestry. Forest politics has been part of my academic life since 2001, when I wrote my political science Master's (cand.polit.) thesis on the influence of international environmental agreements and forest policy recommendations on Norwegian forest policies and forestry. In this work, conducted at the Fridtjof Nansen Institute (FNI), I discovered that private forest certification schemes seem to have had a greater impact on forest management and forestry practices than have the total of all the forest policy recommendations produced by intergovernmental bodies. Puzzled by this observation, I was eager to study the emergence and effectiveness of forest certification schemes in greater depth. How do forest certification schemes work? How do these schemes influence behavior? How did certification schemes emerge in the first place? Fisheries certification seemed to be a relevant case for comparison, as it was modeled on forest certification. The decision to publish a compilation of articles rather than a monograph is the result of several years of research on the issues under investigation, which commenced well before I began my doctoral work. Although many doctoral students explore their subject matter through the process of writing a long monograph, briefer articles focusing on the key arguments and results turned out to be a more fruitful option for me.

This dissertation could not have been written without the help of many people. I am grateful to my supervisor, Professor Arild Underdal at the Department of Political Science, University of Oslo, for his intellectual mentorship and continued encouragement and support. His interest in my work and his constructive comments have inspired me and helped me to focus on the key issues. I also owe sincere gratitude to my second supervisor Olav Schram Stokke, Senior Research Fellow at FNI, who has supported, influenced, and shaped this project from its inception. Not only did Olav skillfully head the two research projects at FNI from which this dissertation grew, but he has also shared his helpful comments on the introductory and concluding chapters as well as on early paper drafts.

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Lysaker, June 2008

Lars H. Gulbrandsen

Introduction

A multitude of public and private organizations engage in international standard-setting processes. Some organizations set technical standards to coordinate business or government behavior for a number of issue areas like the distribution of radio frequencies, international aviation, maritime classification and transportation, global communication systems, financial reporting and accounting, the size and shape of nuts and bolts, and the like. Other organizations set standards for international games and sports, governing everything from the organization of local chess clubs around the world to international football events. Some organizations develop standards for voluntary information disclosure: two examples are the Global Reporting Initiative (GRI), a leading global standard in the field of nonfinancial reporting; and the Extractive Industries Transparency Initiative (EITI), a public-private initiative created to increase the transparency of payments made by companies in the extractive industries to host governments. Other organizations, like the chemical industry's Responsible Care, develop industrywide codes of conduct to promote specific principles, norms, and guidelines for environmentally responsible conduct.

In recent years, however, non-state actors have created a new type of transnational institution in the shape of certification schemes that address environmental and social concerns in fisheries, forestry, tourism, coffee production, mining, and other industries. These certification schemes go beyond voluntary codes of conduct and self-regulatory modes of governing, in that they involve the development of prescriptive environmental and social standards for certification, which require behavioral changes and independent verification of compliance (Cashore 2002). They are more demanding than government-sponsored corporate social responsibility initiatives such as the UN Global Compact – a set of ten universal principles in the areas of human rights, labor, the environment, and anti-corruption – which are not enforced. These new non-state certification schemes constitute governing arenas in which a wide range of stakeholders interact and agree upon rules and governance mechanisms (Bernstein and Cashore 2007). The founders of these schemes often claim that they are more inclusive, transparent, democratic, and accountable than are many of the formal and informal

governance networks in the international and domestic domains. Finally, private companies participate in these certification schemes on a voluntary basis. Being created and governed by non-state actors, there is no use of legal coercion to make producers sign onto the schemes (Cashore 2002). Rather, activists and advocacy coalitions use a range of strategies to convince or pressure producers to participate.

This thesis examines non-state governance schemes through the study of forest certification from the global to the domestic level, comparing it with fisheries certification. Forest certification is an appealing area of study because it arguably represents one of the most advanced and dynamic cases of non-state rulemaking and governance in the environmental realm (Cashore 2002). Although certification schemes were first developed through forestry initiatives, fisheries shared similar concerns: resource depletion, environmental degradation, and insufficient governmental action. This thesis compares forest and fisheries certification, to determine if the same mechanisms and processes can explain the emergence and effectiveness of certification schemes in two different sectors. I chose these cases to compare at the global and system levels because forests and fish stocks are governed in different ways. Whereas forests are national resources governed primarily by domestic authorities and private owners or companies with logging concessions, fish stocks are common-pool resources governed through multilateral, bilateral, and domestic management regimes.

This chapter proceeds as follows. First, I outline the research questions, provide a brief overview of extant literature on non-state global environmental governance, and present the object under investigation. The next section turns to the theoretical approach of the thesis. I examine two theoretical perspectives on the formation and effectiveness of non-state governance institutions and argue that insights from each of these perspectives can be combined in the analysis. This section is followed by the analytical framework of the dissertation. Based on the theoretical perspectives and empirically grounded work on non-state governance, I outline factors that are likely to influence the emergence and effectiveness of forest and fisheries certification schemes. In the closing section, I turn to the research design of the study and briefly review the cases under investigation.

1. Research questions and the object studied

The overall purpose of this thesis is to contribute to the understanding of an under-explored area of contemporary environmental politics: the emergence and effectiveness of non-state institutions in the shape of voluntary certification and labeling schemes. In this section, I outline the research questions of the thesis, discuss how non-state governance schemes can be studied, and review the object under investigation.

1.1 Research questions

The overarching research questions in this thesis are fundamental to political science: How can we explain institutional formation? How do institutions influence behavior? Although we know a great deal about the rise and effectiveness of international regimes established by states, we still have limited knowledge about the formation and effectiveness of transnational governance schemes developed by non-state actors such as non-governmental organizations (NGOs) and industry associations. This study examines the following broad research questions related to institutional emergence and effectiveness:

- How can we explain the emergence and spread of non-state certification schemes in the forestry and fisheries sectors?
- How and to what extent does the organization of standard-setting processes influence standard-setting outcomes?
- What are the causal mechanisms that link certification schemes and behavioral change; and when, and under what conditions, are these mechanisms likely to influence behavior?

Institutional emergence: Forest and fisheries certification schemes have become vibrant and innovative venues for non-state rulemaking and governance. An examination of these certification schemes can help us to understand how non-state governance institutions evolve and spread, and why they increasingly supplement state-based, territorial government. I do not seek to identify all the factors that could influence non-state institutional formation, but rather to uncover the *processes* and *mechanisms* of the emergence and proliferation of non-state governance schemes. An analytical focus on processes and mechanisms can enrich the extant literature on non-state governance and

private institutions, which is typically based on empirical narratives and single case studies rather than comparative case study research. It can also enrich the theoretical literature on global governance, which often lacks an empirical grounding in specific cases of non-state governance.

Organizing standard-setting processes: Non-state certification schemes constitute governing arenas that regulate the access and interactions of participants. *Constitutive* rules that regulate access, participation, and decision making can be expected to influence standard-setting processes and the *regulative* rules (standards) being produced. I am interested in how constitutive rules regulating the access, participation, and decision-making rights of stakeholders such as environmental NGOs, industry associations, and social groups influence the unfolding of the standard-setting process and the outcome of that process. I am also interested in how non-state actors organize rulemaking and governance to create legitimacy for their actions and to enhance accountability. The organizational focus enables a careful analysis of the framing, operationalization, and transformation of accountability and legitimacy within and among certification schemes operating in the forestry and fisheries sectors. Finally, I am interested in the role of science in rule-setting processes. Scientific knowledge can be assumed to constitute a platform for negotiating and discussing standards. Without credible knowledge about the causes and consequences of the environmental problem at hand, standard setters would be hard put to create appropriate rules to address the problem. Stakeholders must also be convinced that the standards are reasonable, appropriate, and legitimate, and that they are based on the best available knowledge. Scientific knowledge could serve to justify why it is important to adopt standards and why target companies ought to comply. In one sense, standard setting is a way of translating complex knowledge to a set of explicit rules. On the other hand, standards cannot simply be derived from knowledge, and the process is likely to involve bargaining among different stakeholders. The focus on the organization of the science-policy dialogue enables me to undertake an analysis of the influence of organizational form on the process of transforming knowledge to a set of concrete standards.

Institutional effectiveness: Following the most common definition of regime effectiveness, institutions of environmental governance can be considered effective if they contribute to the alleviation or resolution of the specific problems they address

(e.g. Underdal 1992, 2002; Young and Levy 1999). A distinction should be made between the direct effects of an institution and other consequences flowing from regime formation efforts (Underdal 2002: 5). Whereas an investigation of the direct effects of an institution is the appropriate strategy for evaluating the institution itself, the other consequences flowing from regime formation efforts provide a basis for exploring the broader consequences of problem-solving efforts. In this study of non-state governance schemes, I am interested in narrow institutional effectiveness and in the broader consequences generated by problem-solving efforts. My ambition is not to determine if the problem at hand can be solved under present certification schemes, but rather to identify causal mechanisms that mediate between certification schemes and changes in problem-relevant behavior as well as the variables that influence problem-solving effectiveness. Specifying theoretically based and empirically grounded causal mechanisms is important for understanding the relationship between institutions and changes in problem-relevant behavior (Elster 1989; Young and Levy 1999). Detailed process tracing and case-study analysis of certification schemes can uncover when and under what conditions these mechanisms influence behavior. In addition, two broader regime consequences are in focus in this study: shifting alliances among stakeholders and public and private institutional interplay. First, we may expect that collaboration among NGOs, business, and other stakeholders in standard-setting projects may have effects over and beyond instrumental problem solving. Because there have traditionally been relatively high levels of conflict among environmentalists and business actors in the forestry and fisheries sectors, it is relevant to examine collaboration in non-state rulemaking projects to determine if it has resulted in conflict resolution, new cleavages, or shifting alliances among stakeholders. Second, there is likely to be interplay between public and private institutions governing natural resource use and protection. Because certification initiatives exist alongside existing international institutions and national laws and regulations, it is useful to discuss interaction effects between public and private rulemaking and governance. Public and private institutions can reinforce each others' rules and enforcement capacities (positive interplay), but they may also disrupt or impede each others' effectiveness (negative interplay). In this context, I am also interested in examining certification initiatives to see if they tend to supplement or supplant traditional public policy regulations.

1.2 Non-state global environmental governance

In recent years, literature on global governance and multi-level governance has emerged in opposition to the state-centric ontology of traditional international relations theorizing. According to Rosenau (1995: 13), "global governance is conceived to include systems of rule at all level of human activity – from the family to the international organization – in which the pursuit of goals has transnational repercussions". Global governance approaches are used to capture and understand the myriad networks and steering arrangements in world affairs in the absence of an overarching authority at the international level (e.g. Rosenau 1997, 2003). The concept of multi-level governance has been applied primarily to studies of European Union policy making and politics (e.g. Hooghe and Marks 2001). It also has relevance, however, for the study of non-state governance, in that it directs attention to the multiplicity of actors and networks engaged in policy making and enactment at different levels of authority and in various sectors (Bache and Flinders 2004). Multi-level and global-governance scholars have in common their assertion that, as a result of globalization, centralization, and supranational integration on the one hand and localization, regionalization, and fragmentation on the other, states must increasingly share rulemaking authority with subnational, transnational, and supranational actors.

The global governance literature points to the alleged failure of international relations theory to capture adequately the effects of globalization and the increasing salience and impact of non-state actors such as NGOs, social movements, companies, and the media in world affairs. One of the key claims in this literature is that government must be studied as a *process* rather than as an institution (Rosenau and Czempiel, 1992). Studies of global governance typically focus on nonhierarchical, network-based modes of governing in which a range of actors are involved. Consequently, we should look beyond intergovernmental regimes to identify the central governance arenas and the key actors in a transnationalizing world. According to global governance scholars, we are witnessing a shift from government to governance, characterized by privatization, state transformation, shared public and private authority, and non-state rule-setting supplementing or even supplanting traditional command-and-control regulation (Rosenau, 1997, 2003; Rhodes 1996, 1997; Pierre, 2000). Sometimes referred to as "governance without government" (e.g. Rosenau and Czempiel, 1992; Rhodes, 1996), this development implies a less central role for the state and increased influence for non-state actors.

A growing literature has explored the explosion of transnational advocacy coalitions around the world, showing that activism was limited in the past to the domestic arena, but that activists today organize across national boundaries, bringing together stakeholders in a number of countries to put pressure on companies or governments (e.g. Risse-Kappen 1995; Wapner 1996; Keck and Sikkink 1998; McAdam, Tarrow, and Tilly 2001). More specifically, several recent studies have examined the emergence of non-state institutions in world politics, including various forms of "private authority" (Cutler, Haufler, and Porter 1999; Haufler 2001; Hall and Biersteker 2002) and transnational rule-setting arrangements (Djelic and Sahlin-Andersson 2006). Seeking to conceptualize the changing patterns of governance in international affairs, scholars have noted the increasing importance of private authorities as a trend characterized by what they have come to call the "privatization of governance" (Cutler, Haufler, and Porter 1999) and the spread of "non-state market-driven" governance systems that depend on market support for their rulemaking authority (Cashore 2002).

In this literature, non-state governance systems are seen as emerging in response to globalization processes and transboundary environmental problems that states have been unable or unwilling to resolve themselves. Today there are myriad steering and governance arrangements at different levels of authority that seek to influence company conduct. Many of these arrangements have been created with little or no involvement of states or traditional international organizations like the UN or the World Bank. Indeed, several transnational governance schemes have been created in response to failure of states to resolve pressing transboundary environmental problems. In the apparel products field, for example, NGOs created labor standard certification schemes to address sweatshop labor practices, child labor, and other human rights violations (Bartley 2005). For other issues, such as trading in coffee, cocoa, and bananas, NGOs have taken the initiative to create fair-trade labeling schemes to guarantee producers in developing countries a fair minimum price for their products and to improve their working conditions.

A distinct literature on "ecological modernization" focuses on the changing role of the state, science and technology, the market, and civil society in response to the "ecological crisis" and the inadequacy of traditional state intervention (e.g. Spaargaren and Mol 1992; Mol 1996; Mol, Lauber, and Liefferink 2000). Hajer (1995) sees ecological modernization as the new dominant discourse about environmental problems. Unlike earlier antagonistic debates among environmental activists, governments, and

industry, the ecological modernization literature views environmental problems as possible to anticipate, calculate, and resolve through scientific and technological advances and collaborative solutions among industries, states, and civil society. The communicative and interactive approach to policy-making is said to transform the major institutions of modern society – science and technology, the market, and the state. It means that a broad range of actors engages in politics – often in coalitions located outside traditional channels of influence – and that the state assumes a new role, steering at a distance and facilitating collaboration rather than commanding change.

In this context, processes of standardization could be seen as a new and collaborative way of policy making, corresponding to the environmental modernization discourse (Boström 2003a). The emergence of voluntary codes of conduct, standards, and agreements is part of a general shift from command and control instruments and "end of pipe" regulations toward process-oriented, collaborative solutions among environmental organizations, industry, and the state. This shift is seen as a result of the inability of traditional state regulations to deal effectively with diffuse, transboundary, and complex environmental problems, as well as the ideological favoring of market-based solutions in modern society (Hajer 1995; Mol 1996; Mol, Lauber, and Liefferink 2000). Economic, market-based, and flexible instruments are claimed to be more effective at stimulating technological innovation and internalization of environmental costs than traditional regulations are. Although the activities of companies have resulted in a wide range of environmental problems, such as climate change, ozone depletion, deforestation, and over-fishing, companies are increasingly seen as part of the solution to these problems. Similarly, in the new climate of voluntary policy making, environmental organizations assume new roles through strategic engagement with companies and industry associations (Boström 2003a). Many environmental organizations have searched for new ways to influence corporate conduct and, as a result, have cooperated with businesses to set voluntary standards and develop mechanisms to enforce them.

What, then, are the theories and analytical tools that can guide us in the study of non-state governance schemes? Although it is possible to specify the core analytical claims in the ecological modernization and global governance literature, the implications for studying the formation and effectiveness of non-state governance schemes remain elusive. To be sure, the theoretical and empirical work on advocacy networks, private authorities, and public-private partnerships provides a number of

valuable insights, to which I return in the analytical framework. There is, however, no coherent theory of multi-level or global governance that could be used to provide an adequate *prediction* or *explanation* for when and under what conditions non-state governance institutions are likely to emerge and influence behavior in their specific domains. The global governance literature has been criticized for neglecting the role of power in the governing process (Barnett and Duvall 2005) and for failing to provide the analytical tools needed to grasp the content of the governance process (Sending and Neumann 2006). Perhaps more important in the context of addressing my research questions, this literature has been said to be "incapable of providing clear predictions or even explanations (other than the most general) of outcomes in the governing process" (Peters and Pierre 2004: 88). In short, the global governance literature provides neither a theory that could help generate nontrivial propositions about non-state institutional formation and consequences nor the analytical tools to explain governance outcomes.

The assumption that states are the key actors in world politics and the focus on institution building and effects separate the literature on international regimes from the literature on multi-level governance and global governance. The regime literature arguably provides the most comprehensive and advanced accounts of institutional formation and consequences in international relations. Cutler and colleagues (1999: 14) claim that whereas the regime literature has remained "stubbornly state centric" in its conceptual and empirical focus, "the definition itself, and its utility in explaining certain forms of cooperation, does not require the relevant actors to be states". Although this literature typically focuses on states and their interactions in international regimes created and dominated by states, there are several similarities between regimes established by states and private regimes or governance schemes established by non-state actors. Being issue-specific within clear spatial and functional boundaries and with authority to enforce or facilitate compliance in their specific concerns, both public and private regimes seek to influence the behavior of their members. In essence, mainstream, rationalist regime theory is a theory about *voluntary collaboration* among actors to create mutually beneficial institutional arrangements in order to achieve some common goals.[1]

[1] The assumptions about voluntary and mutually beneficial cooperation are based on the rationalist or interest-based strand of regime theory. According to power-based (realist) regime theory, regime formation may involve hegemonic coercion and struggles to obtain *relative* gains rather than *absolute* gains (see e.g. Hasenclever, Mayer and Rittberger 1997: Chapter 4).

The attractiveness of applying insights from rationalist regime theory to analyzing non-state governance lies, in particular, in its focus on issue specificity, institutional formation, causal consequences, and problem-solving capacity (Stokke 1997; Young and Levy 1999; Miles et al. 2002). In light of the criticism directed at the global governance literature, there are good reasons for taking regime theory as a point of departure for exploring the mechanisms and pathways that could explain institutional formation and effectiveness. Given the focus on institutions in this thesis, sociological institutionalism is another rich and influential theoretical approach that I draw upon in the analytical framework. Insights from sociological institutionalism have influenced constructivist accounts of international regimes and international organizations (e.g. Barnett and Finnemore 2004). Rational institutionalism and sociological institutionalism are reviewed and discussed in the next section, but I first take a closer look at the object under investigation.

1.3 The object studied: Fisheries and forest certification

Despite increasing concern over deforestation in the tropics and global forest degradation, states have failed to agree on a legally binding global agreement for the protection and sustainable use of forests. Forest certification was introduced by environmental NGOs to ameliorate environmental degradation in forestry, caused by intensive commercial exploitation and practices such as the logging of old-growth forests and clear cutting of large areas. By the late 1980s, NGOs had become frustrated with the failure of the International Tropical Timber Organization (ITTO) to promote tropical forest protection. The refusal of the ITTO to establish a labeling system for tropical timber from sustainably managed sources convinced the World Wide Fund for Nature (WWF) that such a system had to be developed by private initiative (Humphreys 1996: 72–75). Their conviction gained strength during the preparatory process for the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro, given the lack of support that was shown for the aspiration to negotiate a legally binding forest convention.

In 1993, primarily at the initiative of the WWF, the Forest Stewardship Council (FSC) was officially founded as the first global forest certification scheme by environmental organizations, timber traders, indigenous peoples' groups, forest worker organizations, and other stakeholders. The FSC was formed to promote sustainable forest practices and to encourage retailers and consumers to support such practices by

buying certified forest products. More precisely, the FSC developed principles and criteria for its definition of "well-managed forests", including tenure and use rights and responsibilities, indigenous peoples' and workers' rights, use of forest products and services to maximize economic viability and environmental and social benefits, maintenance of forests with high conservation value, environmental impact, monitoring and assessment, and planning and management of plantations.[2] These principles and criteria are elaborated upon and specified for each country or region in national or regional FSC working groups, through a process in which ecological, economic, and social stakeholders have, in principle, equal decision-making powers. Because FSC arose in opposition to intergovernmental cooperation on forests, its principles and criteria are not linked to any internationally agreed-upon forest policy recommendations. Unlike many standard development processes in which governments are involved, FSC rules explicitly prohibit the participation of government representatives in the organization. FSC's international board approves national, regional, or landowner-specific standards consistent with the scheme's principles, criteria, and procedural rules. Another essential ingredient is the opportunity provided by the scheme to track the origin of products through every stage of the supply chain – frequently referred to as the "chain of custody". Such chain-of-custody tracking ensures purchasers and consumers that labeled forest products really originate from certified forests.

The national forestry interest organizations and landowner associations of several countries responded to the creation of FSC by establishing producer-dominated certification schemes. The FSC and its supporters succeeded in creating demand for certification, but many forest companies and forest owners distrusted the scheme because it was initiated and promoted by WWF and other environmental organizations. Equally important, forestry stakeholders disliked its environmental and social standards, which they considered to be stringent and which they claimed were applied with inflexibility. Thus forest industry and landowner associations in Europe, the United States, Canada, and elsewhere were motivated to establish schemes with less stringent environmental and social standards.

Meanwhile, inspired by the establishment of the FSC for the forestry sector, the WWF exported the certification and labeling idea to the fisheries sector. In 1996, the

[2] FSC originally had nine principles; the tenth, on plantations, was added in 1996.

WWF teamed up with Unilever, one of the world's largest purchasers of fish, to establish the Marine Stewardship Council (MSC) as a marked-based certification and labeling scheme for fish and fish products. Breaking free of its parent organizations to consolidate its independence, MSC was established in 1999 as a fully independent nonprofit organization. Although several single-claim schemes such as "dolphin-safe" tuna and "turtle safe" shrimp already existed for seafood labeling, MSC was the first global multi-criteria certification and labeling scheme for marine fisheries. It established global principles and criteria for its definition of "well-managed fisheries". The three main principles of the MSC require (1) that wild-caught fisheries do not conduct operations that lead to overfishing or depletion of exploited populations or that they hinder the rebuilding of depleted populations; (2) that they maintain the structure, productivity, and diversity of the ecosystem on which the fishery depend; and (3) that they have an effective management system in place and comply with local, national, and international fishery laws and standards. These principles are supplemented by a number of more specific operational and management criteria as well as scoring indicators developed for each fishery undergoing certification. The idea is the same as in forest certification: Professional purchasers and consumers may support sustainable management practices by buying products carrying a label indicating that they are sourced from sustainably managed natural resources. As with FSC, the MSC labeling requires chain-of-custody tracking to ensure that products carrying its logo actually originate in a certified fishery. Unlike the FSC, however, the MSC has not yet been challenged by competing certification schemes.

To summarize, by circumventing international forest policy negotiations, forest certification potentially offers an alternative, fast-track route to sustainable forest management around the world. Whereas MSC certification builds on international fisheries agreements, it also seeks to offer environmentally concerned companies, retailers, and consumers an effective tool to promote more stringent environmental rules and more effective enforcement mechanisms than those created by governments.

2. Theoretical perspectives

Although the focus of this thesis is on non-state governance schemes, I share a research interest in exploring institutional formation and effectiveness with students of international regimes established by states. The thesis thus draws on two well-

established theoretical perspectives in the social sciences: rational institutionalism and sociological institutionalism. Although these perspectives are sometimes said to be incompatible in terms of ontological and epistemological premises, I argue that insights from rational and sociological institutionalism can be combined to examine and understand institutional formation and consequences. To draw upon insights from these theoretical traditions resonates well with recent efforts to bridge the gap between the rationalist and constructivist literatures on international relations (e.g. Adler 1997; Checkel 1997, 2007; Finnemore and Sikkink 1998; Risse, Ropp, and Sikkink 1999; Fearon and Wendt 2002), and to draw upon sociological institutionalism in the study of international organizations (Finnemore 1996; Barnett and Finnemore 1999, 2004). Indeed, accounts of international regime formation and effectiveness often draw on insights from both rational and sociological institutionalism (Stokke 1997; Young 1999; Young and Levy 1999), as could accounts of non-state regimes or governance schemes.

2.1 Rational institutionalism

Given the focus on *transnational* institutions in this thesis, the rationalist strand of regime theory stands out as one particularly useful approach for examining institutional formation and institutional effects. To be sure, there are several theoretical approaches within regime theory that are not dissimilar to broader theoretical approaches within the field of international relations theory. For instance, Hasenclever, Mayer, and Rittberger (1997) argue that one can differentiate among interest-based, power-based, and knowledge-based theories of international regimes. For the purpose of clarity, however, I am drawing on insights from the mainstream interest-based or rationalist strand of regime theory in this section in order to explore non-state regime formation and consequences. Whereas state-centric, power-based (realist) accounts of international regime formation and effectiveness seem less relevant for the study of non-state regimes, I return to some of the insights from knowledge-based (constructivist) regime theory in the next section on sociological institutionalism.

Partly because of the different approaches taken to study regimes, there is some disagreement over how to define and delineate regimes (see e.g. Young 1986; Levy, Young, and Zürn 1995). The most commonly cited definition is probably Krasner's (1982: 186) specification of regimes as "sets of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given area of international relations". International environmental regimes typically

include a core treaty, such as a framework convention, supplemented by one or several protocols, although they may also be based on "soft law" agreements (Levy, Young, and Zürn 1995: 274). Prototypical examples of international environmental regimes include the ozone layer protection regime, based upon the Convention for the Protection of the Ozone Layer (1985) and upon the Montreal Protocol on Substances that deplete the Ozone Layer (1987); and the climate change regime, based upon the Framework Convention on Climate Change (1992) and the Kyoto Protocol (1997).

Do international regimes such as these have independent causal effects, or do they merely reflect underlying power and interest structures or pre-institutional social orders? From the perspective of structural realism, regimes are seen as epiphenomena that mirror and never change the fundamental configurations of power and interests in world politics (Strange 1982; Mearsheimer 1995). According to Waltz (1979), we must distinguish between institutions and what he calls *ordering principles*; the ordering principle of an anarchical international system means that the only international institutions that can be built and sustained are those based on consensual cooperation or hegemonic coercion.

In response to the relatively pessimistic implications of structural realism, regime theorists have set out to demonstrate that institutions have causal autonomy and that they are not merely a reflection of configurations of power and interests in world politics. One of the main claims of the interest-based perspective is that regimes may change the utility that actors assign to behavioral options within an issue area. Unlike structural realists, regime analysts claim that once established, regimes may have significant behavioral consequences for their members – independent of underlying power structures. For example, an effective regime may reduce the risk of unilateral defection by increasing the costs of breaching certain principles, norms, and rules, and/or by increasing the benefits of complying. More generally, regime theorists argue that because regimes enhance reciprocity, reduce barriers to mutually beneficial collaboration, and are resilient to changes in the configurations of interests and power structures among states, they cannot be dismissed as epiphenomena in international relations (e.g. Axelrod and Keohane 1985; Young and Osherenko 1993; Haas, Kehoane, and Levy 1993).

Regime theorists in the rationalist tradition treat state interests as exogenously given. Many analysts conceive of states as unitary rational actors, although some also look at the influence of domestic interest groups. In an international society

characterized by "complex interdependence" (Keohane and Nye 1977), states have mutual interests in a variety of issue areas such as security, energy policies, policing, trade, monetary policies, sustainable resource management, and the environment. Efforts to provide a public good (a good that cannot be de denied to anyone once it is provided) through collective action always involve the risk of free riding by actors who do not share the costs of obtaining the good, but reap the benefits (Olson 1965). According to Olson (1965), if there were no penalties for failing to contribute to the realization of the public good, it would not be in the self-interest of rational, utility-maximizing actors to contribute to its realization, even though all actors would benefit from it.

Although international relations are beset with collective action problems, the relatively small number of states in the world decreases problems with collective action and enhances the likely success of collaboration (Keohane 1984: 77). Keohane's functional or contractualist theory of international regimes explains regime formations as, *inter alia*, efforts to resolve collective action problems and provide mutual goods by enhancing reciprocity and certainty about future interactions and reducing transaction costs and other barriers to mutually beneficial collaboration (Keohane 1984, 1989, 1993). Using game theory, Axelrod (1984) has demonstrated that collaboration among utility-maximizing actors can emerge as a result of repeated interactions over time. And, opposing Olson's (1965) relatively pessimistic view on collective action, Ostrom (1990) has argued that common-pool resources, such as inshore fisheries and communal forests, can be managed by common property regimes if they are properly designed.

One may expect that non-state actors, like states, agree on *coordination standards* to resolve coordination problems, decrease uncertainty, and reduce transaction costs. For standards organizations to form in the first place, actors must perceive that coordination will serve their interests and that the achievement of any benefit (whether individual or collective) is contingent upon mutual action. Producers, firms, and other market actors could therefore be expected to contribute to institutional formation and participate in those institutions to increase utility. In business coordination situations, in which actors are indifferent about where to coordinate behavior, all actors profit from collaboration and nobody profits from defection. Once established, an industry code of conduct or standard may be adopted by all companies and could in one sense be regarded as a collective good for the industry. Examples of coordination standards are international aviation safety standards like those established

by the International Civil Aviation Organization (ICAO), rules pertaining to the use of sea lanes created by the International Maritime Organization (IMO), or global communication standards like those established by the Internet Corporation for Assigned Names and Numbers (ICANN). As long as actors are indifferent about where to coordinate and are able to communicate, agreeing on such standards is relatively easy (cf. Axelrod 1984; Keohane 1984; Snidal 1985; Young 1999).

There is, however, a fundamental difference between business coordination standards and *performance-based environmental standards* like those in forestry and fisheries. Although there are situations in which all companies can benefit from coordinating their behavior and creating common standards, performance-based standards and certification schemes require companies to undertake costly behavioral changes that they otherwise would not be required to implement (Cashore, Auld, and Newsom, 2004). Why, then, do profit-maximizing companies create performance-based standards and adopt such standards on a voluntary basis? Because environmental and social reputations may reflect on the industry as a whole – not merely on individual firms (Gunningham and Rees 1997) – industry associations often develop industry standards or codes of conduct in order to demonstrate the high level of responsibility they assume for their operations, to protect the reputation of their industry, and to provide credible information to consumers (cf. Klein 1997; Spar 1998). The collective action problem is reduced by the fact that companies often participate in industry associations and are able to monitor each other's behavior. An industry response of this kind occurred when the US chemical industry developed the Responsible Care code-of-conduct following the 1984 Bhopal Disaster in India, in which the accidental release of 40 tonnes of toxic gas from a pesticide plant owned by the US company Union Carbide killed several thousand people.

Other scholars hold that companies often create or adopt voluntary standards in the hope of preventing enactment of more demanding public policy regulations (e.g. Clapp 2005: 224). Yet another possibility is that their managers want to prepare for and take advantage of anticipated public policy regulations. Either way, companies contribute to institutional formation in order to maximize utility and manage the risks and costs of doing business in the global marketplace.

The question then becomes: *How* do institutions produce effects? Regime theorists have tried to answer this question by tracing processes that mediate between the institutions and particular outcomes (Stokke 1997; Young and Levy 1999). Such

process tracing is often guided by the specification of one or more *causal mechanisms* that are believed to link institutions and behavioral change. Whether we study international regimes established by states or non-state institutions for environmental governance, our task would then be to specify the ways in which the institutions may contribute to problem-solving behavioral adaptations. According to interest-based regime theory, the principle function of international regimes is to *restructure incentives* by increasing the benefits of participation and compliance with rules and by adding costs to defection (Barrett 2003). Similarly, certification and labeling schemes may influence the cost-benefit calculations of utility-maximizing companies by creating opportunities to profit from market demand for products flowing from sustainable resource-management practices. Interest may be exhibited within well-positioned companies for joining a labeling program in order to obtain a competitive advantage in the form of a "green" label. For example, a company that has already implemented stringent environmental standards may be interested in developing a scheme that would allow its products to carry a label signaling responsibility and high environmental performance. Other companies may see new business opportunities in niche markets through participation in certification and labeling schemes. And some companies may choose to participate in such schemes in order to uphold their market access in environmentally concerned markets.

In any case, the causal logic is that certification standards will require applicants to modify their practices to become eligible to participate in the scheme. If certification bodies approve management practices and performance levels, applicants will be certified and, in most systems, will have an opportunity to label their products. The label itself will identify products that flow from sustainably managed resources, thus permitting retailers and other professional purchasers to signal attitudes that could distinguish them from other, similar purchasers. Similarly, individual consumers may signal a preference for sustainable management practices by choosing labeled rather than unlabeled products. To the extent that greater market access or price premiums would flow from this process, other producers will find the option of joining more attractive, resulting in further diffusion of sustainable management practices.

Turning now to *compliance* with rules, the interest-based strand of regime theory, argues that states – as rational, unitary actors – may and often do act within the constraints of rules for reasons of material self-interest and utility. We assume that companies may also choose to comply with voluntary standards based upon rational-

calculative decisions because compliance is expected to reduce costs or generate net benefits in the long term. We expect that effective non-state standards institutions, similar to regimes established by states, restructure incentives by increasing the benefits of compliance with standards and penalizing noncompliance and defection. In short, the principal function of standards organizations is to create rules and governance arrangements that contribute to a realignment of incentives governing resource management and use.

Again, this function will not be important in pure coordination games, but will be essential in cooperation games (Hasenclever, Mayer, and Rittberger 1997: 45-53). As indicated earlier, once coordination rules or standards have been established, actors would have *no incentive for cheating* (Young 1999: 27). The type of standards we are interested in here, however, is of a different kind; a purely utility-maximizing actor could benefit from adopting these standards and *not* complying with them, given that noncompliance is not detected or does not have negative consequences (Young 1999; see also Snidal 1985). Because compliance with performance-based standards like those for fisheries and forest certification typically requires (costly) behavioral changes, companies could benefit from adopting the standards but not complying with them. It must be possible to detect noncompliance, therefore, and compliance must be enforced. The principal tool for monitoring and enforcing compliance in certification schemes is regular third-party auditing of practices. Companies that comply with the certification standards are rewarded with a certificate that attests to sustainable management practices. Companies that do not comply with standards risk the penalty of having their certificate suspended.

In the literature on international environmental regimes, a distinction is sometimes made between the enforcement approach and the management approach to compliance (Chayes and Chayes 1995). Proponents of the management approach to compliance argue that information sharing, technical and financial assistance, implementation support, systems of implementation review, and the like will be just as effective in eliciting compliance as strict enforcement of rules will be (ibid.). We may expect that such capacity building could facilitate compliance with non-state standards as well, but capacity building is normally not a task for non-state institutions with limited financial and material resources. Without the support of governments, there are limited possibilities for non-state institutions to apply the management approach to

compliance. From the perspective of rational institutionalism, therefore, compliance with non-state standards must, in principle, be monitored and enforced.

2.2 Sociological institutionalism

From the perspective of sociological institutionalism, institutionalized norms in the environments of organizations define appropriate and inappropriate behavior, prescribe and proscribe courses of action, and legitimate particular organizational forms (Meyer and Rowan 1977; DiMaggio and Powell 1983, 1991; Scott 2001).[3] Organizations adopt a certain language and certain procedures because the actions of an entity must be acceptable or appropriate within a certain institutional framework. In early neoinstitutional work, organizations are said to reflect – and never to transform – institutionalized norms and values in the environments and systems in which they are situated. According to sociologists Meyer and Rowan (1977), formal organizations derive their form and function from institutionalized social orders. The adoption of certain formal structures is seen to be the result of the traveling and spread of *rationalized myths*. Myths are widely held belief systems and cultural frames that are imposed upon or adopted by organizations. They are rationalized because they prescribe certain ways of organizing and proscribe other ways of organizing to accomplish a given end. Organizations adopt rationalized myths and must reflect institutionalized social orders in order to be granted legitimacy from salient constituencies in their environments (ibid).

The effect of rationalized myths on institutional formation is organizational imitation and convergence. Organizations derive their form, not from instrumental efficiency, but rather from institutionalized norms and values in the environments in which they are situated. Because organizations are reflections of rather than creators of underlying structures, there are no autonomous causal effects from the organizations. In this perspective, the formal organization may be crucial for legitimizing behavior, but does little to change the rules of the game and underlying social orders. Similarly, constructivist regime theorists stress that international regimes are embedded in and molded by broader normative contexts (e.g. Ruggie 1983; Kratochwil and Ruggie 1986). According to this view, regimes are not so much creators of international norms and practices as they are reflections of underlying normative structures and social orders

(Stokke 1997). Strong versions of this argument hold that underlying normative structures are fully determinate of regime design and social practices, whereas more moderate versions hold that normative structures are important sources of legitimization, but not full determinants of formal structure. In the latter view, there is room for both agency and transformation of underlying social orders. According to Conca (2006: 69):

> If the normative order of international relations is powerful without being fully determinate – authoritative but not hegemonic – then specific struggles to craft the rules, norms, and institutions of global environmental governance could yield institutional forms other than the statist, territorialized, functional-rational institutional form. Studying these struggles may shed light on whether a richer array of institutional forms than we can imagine exist in practice.

Sociological institutionalists subscribing to the notion of powerful and fully determinate institutional environments have long struggled with explaining *institutional change*. If organizations merely reflect deeper layers of social orders or configurations of power and interest, how can we explain why and how institutions emerge, evolve, and sometimes die? Part of the answer is given by organizational field-level analyses (e.g. DiMaggio and Powell 1983; DiMaggio 1991), which shows that even though institutional environments are important, organizations can themselves be agents of change and transform the fields in which they are situated. Institutional theorists have developed the concept of *organizational field* to isolate for analysis "a collection of interdependent organizations operating with common rules, norms, and meaning systems" (Scott 2003: 130). According to DiMaggio and Powell (1983: 148), an organizational field comprises "those organizations that, in the aggregate, constitute a recognized area of institutional life". Highly institutionalized fields are characterized by sets of rules and practices that are taken for granted. The character of an organization's embeddedness in a field shapes the organizational arrangements, procedures, and strategies that are perceived to be legitimate. As explained by Scott (2003: 130) in field-level analyses, "organizations are treated as members of larger, overarching systems exhibiting, to varying degrees, structure and coherence".

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[3] The sociological literature on institutions is, like the rationalist literature, both rich and varied. In this section, I review only some of the most important contributions to this literature.

Organizations in a specific field may not be linked by direct interactions, but they operate in the same realm and under similar conditions and therefore exhibit similar structural characteristics (Scott 2003: 130). Unlike the notion of relatively fixed institutional environments, a field-level perspective allows us to observe not only the influence of common norms, rules, and meaning systems, but also the disappearance of some organizational types and the emergence of new forms. Whereas early neoinstitutional work tended to see organizations as adapting rather passively to rationalized myths, more recent work has demonstrated that organizations adapt and transform myths and innovate to create institutional change (e.g. Sahlin-Andersson 1996; Hoffman 1999; Brunsson and Jacobsson 2000; Sahlin-Andersson and Engwall 2002).

A sociological account of regime formation would contend that specific *organizational carriers* are agents of institutional change in organizational fields. International organizations, NGOs, business consultants, and activists are said to constitute networks with a certain culture and significant influence on the formation, transformation, and flow of organizational ideas (e.g. Boli and Thomas 1999; Djelic and Sahlin-Andersson 2006; Drori, Meyer, and Hwang 2006). For example, the FSC was established primarily at the initiative of WWF, which also exported the FSC certification model to the fisheries sector by creating the MSC. Whereas rational institutionalism sees regime formation as a functional solution to (environmental) problems in specific sectors, sociological institutionalism highlights the influence of organizational carriers who promote particular organizational recipes that are consistent with salient norm and values in the institutional environment. In a sense, the spread of the certification model could be seen as resulting from a solution in search of a problem (March and Olsen 1976) rather than a functional response to particular problems (Auld et al. 2007). The success of an organization is judged from its ability to adapt to popular organizational ideas and recipes, which, in turn, are legitimized by institutionalized norms and values. Consequently, a successful recipe can be expected to be consistent and aligned with salient norms and values in an organizational field. Popular organizational recipes may or may not enhance instrumental problem solving, but as long as the organization adopts those recipes, it is deemed successful by field-level audiences.

According to DiMaggio and Powell (1983), homogenization within organizational fields may occur as a result of three processes: *coercive isomorphism*,

mimetic processes, and *normative pressures*. Coercive isomorphism may result from government regulations, but it could also result from preferences for particular organizational forms from donors, charities, or other funding bodies. Mimetic processes occur when a number of organizations imitate a specific organizational model that is considered particularly legitimate or successful. Organizational models may be promoted by carriers like environmental NGOs, consulting firms, management gurus, or industry trade organizations. Normative pressures occur as professionals, educated in the same schools or university systems, occupy similar positions across a range of organizations, and introduce their occupational principles, norms, and values in those organizations. Although all these processes may be at play in non-state institutional formation and design, I expect that mimetic processes will be particularly important as a result of the influence of a global culture comprising broad consensus on the set of appropriate organizational forms (Meyer et al. 1997) and the actions of organizational carriers like the WWF and other advocacy groups. Environmental NGOs advocate the adoption of specific organizational recipes by praising or damning industry practices, mobilizing consumers, and convincing companies about the benefits of adopting those recipes.

The spread of the certification model could rewrite the rules of organizations for doing business in a more fundamental way than by restructuring incentives. It may be decided that the organization will participate in certification schemes, because certification is associated with the identity of a modern organization, because it is seen as fashionable, or because it is considered to be a preeminent way of meeting expectations about appropriate conduct from relevant audiences. A particular certification scheme may acquire a high level of legitimacy within a sector, in the sense that participation is considered to be the right and appropriate thing to do. To use labels coined by March and Olsen (1989), they follow the "logic of appropriateness" rather than the utilitarian "logic of consequences". Company leaders may also simply go with the flow and do what many other companies do; instead of calculating the costs and benefits of participation, it may be taken for granted that they ought to participate because other companies are participating. Yet another possibility is that there is no clear idea within the company about the consequences of their participation. Returning again to insights from regime theory, Young (1989) argues that what he calls "a veil of uncertainty" facilitates "institutional bargaining" in processes of international regime formation. His argument is that decision makers' uncertainty about what is in their best

interest and about the future consequences of institutional arrangements enables states to form and participate in regimes. Similarly, uncertainty about the consequences of non-state governance schemes could enable agreement on institutional arrangements among the various stakeholders and facilitate producer participation.

Turning to institutional consequences, a key expectation from sociological institutionalism is that, through their participation in non-state governance schemes, producers may *internalize* norms and rules about appropriate conduct in particular roles and situations. From this perspective, social learning and internalization of norms and rules constitute the prime causal mechanism believed to connect non-state governance schemes to behavioral change. Thus actors learn and accept the norms and rules of the scheme, and then use them to guide their behavior without having to reflect upon them. March and Olsen (1989: 23) depict behavior as being rule-driven: "to describe behavior as driven by rules is to see action as a matching of a situation to the demands of a position". Instead of examining their individual goals and calculating the costs and benefits of behavioral options, then, actors try to match specific situations with the specific role called upon in this situation and the appropriate action as an occupant of that role. Rules of appropriateness are defined by political and social institutions and transmitted through socialization (March and Olsen 1989: 23). According to this view, institutions influence behavior, but in a different way than we would expect from an interest-based perspective.

The assumption that actors follow the logic of appropriateness and not the logic of consequences has important implications for expectations about compliance with certification standards. Whereas rewards for compliance and sanctions for noncompliance are seen as crucial from the rational institutionalism perspective, sociological institutionalists would expect companies to comply with certification rules because of learning processes, internalization of rules, and habit. As a result, the *process* of developing and learning rules becomes more important than compliance verification and enforcement. Stakeholders that consider standards and rules as legitimate are more likely to comply with them than are those that believe the standards are unfair, inequitable, or unjustified. Like legal rules in international society, legitimate standards can exert an autonomous binding force and a "compliance pull" of their own (cf. Franck 1990). According to this perspective, we expect that third-party auditing of practices is still important, but it is seen as a process whereby resource managers learn and accept rules, and then use them to guide their behavior – rather than as an instrument primarily

geared toward the enforcement of compliance. Problems with cheating and free riding do not loom large if stakeholders believe that the standards have emerged from a legitimate and fair process (Breitmeier, Young, and Zürn 2006). In a sense, actors feel compelled to comply with standards that are considered legitimate, even in cases where noncompliance would not be detected or would not have negative consequences.

Beyond the expectations generated from each of the two theoretical perspectives, there is likely to be some type of interplay between the internalization of norms and rules and strategic-calculative decisions about participation in certification schemes and compliance with rules. The principles, norms, rules, and governance arrangements of non-state institutions could result in a realignment or redefinition of company interests and the boundaries of acceptable and appropriate behavior. A company's decision makers may simply take for granted that they ought to participate in a certification scheme in order to obtain a societal license to operate. But they could still adapt strategically to a new reality by choosing to sign up for a less demanding scheme rather than a more stringent scheme. Another possibility is that resource managers in companies that joined certification schemes because of strategic calculative decisions learn and internalize certain environmental protection norms and rules. As a result, they will comply with those norms and rules habitually, without case-by-case deliberations about the costs and benefits of compliance (cf. Breitmeier, Young, and Zürn 2006: 155). The analysis must be sensitive to such interaction effects between the factors that influence institutional formation and effectiveness.

Evaluations about the legitimacy of certification schemes and strategic-calculative evaluations about participation are also likely to be interconnected. If the legitimacy of a certification scheme is widely questioned because of considerations about issues like equity, fairness, and distributive aspects, nonparticipation can be more easily justified and can therefore be less costly for companies. Questions and concerns about the legitimacy of a particular certification scheme could also be part of a strategy for creating support for a competing scheme with different standards. The proliferation of competing schemes could, in turn, result in new struggles for achieving rulemaking legitimacy and support from a wide range of constituents (Cashore, Auld, and Newsom 2004). Moreover, any certification scheme depends on trust and moral support from consumers or other key actors in the marketplace. If certain salient audiences did not see a certification scheme as being legitimate and credible, there would be neither economic incentives nor normative pressures for companies to join the scheme.

2.3 Summary

This discussion has pointed to various causal mechanism and pathways that could mediate between institutions and behavioral outcomes. A focus on causal mechanisms may help the analyst organize process tracing within cases and reveal the branching points and chain of events that resulted in specific outcomes (George and Bennett 2005). Two such general mechanisms have been identified. (1) According to interest-based regime theory, institutions influence behavior by restructuring incentives; they create incentives for compliance and increase the costs of noncompliance. Standard setters offer target companies such rewards as enhanced reputation or greater market access, on the condition that the company adopts and complies with the standards. Behavioral adaptation in line with the standards is more likely to occur when actors expect the promised rewards to be greater than the costs of compliance. (2) According to sociological institutionalism, institutions influence perceptions about acceptable or appropriate behavior within an issue area; they create a sense of obligation to follow rules and commitments. Behavioral adaptation in line with the standards is more likely to occur when actors consider rule following as the appropriate and "right thing to do". These mechanisms are supplementary rather than mutually exclusive; the question is when, and under what conditions, each of them is likely to come into play in non-state standard-setting processes. Having identified general causal mechanisms, I now turn to the key factors that are likely to influence the emergence and effectiveness of non-state governance institutions.

3. Analytical approach

Drawing on extant work on "private authorities", non-state governance, and the organization of certification projects, this section investigates when, and under what conditions, non-state governance schemes are likely to emerge and influence the behavior of target groups. Corresponding to the broad research questions introduced earlier, I outline factors that are likely to influence: (1) the emergence of non-state certification schemes, (2) the organization of standard-setting processes, and (3) the effectiveness of non-state certification schemes.

3.1 The emergence of non-state certification schemes

The central question here is how we can analyze the formation and proliferation of non-state certification schemes in the forestry and fisheries sectors. It is fascinating in its own right to understand patterns of emergence, but it is also fundamental for evaluations of effectiveness, as producers self-select into certification schemes. As a consequence, we have to consider the possibility that these schemes attract participation only from producers that do not have to implement costly management reforms in order to comply with the standards. In this section, I propose key factors that are likely to influence the formation of certification schemes.

Inadequate public regulations

Non-state governance schemes do not exist independently of public rules and regulations. I expect that institutions for non-state governance are more likely to be formed in policy domains that are weakly regulated by public authorities than in policy domains that are strongly regulated by public authorities. The assumption is that non-state actors will be motivated to fill the governance gaps left open by public authorities, supplement weak public rules and regulations with more stringent rules, or compensate for the lack of public regimes by creating private regimes (e.g. Cutler, Haufler, and Porter 1999; Hall and Biersteker 2002). Since the 1980s, environmental NGOs and other stakeholders have been increasingly concerned that traditional public regulations would not offer adequate protection from deforestation and global forest degradation following irresponsible industrial logging in the tropical zone and elsewhere, and that governments would fail to address these problems. The lack of a forest convention or any other legally binding agreement on forests, gave environmental NGOs reasons to seek an alternative solution (Humphreys 1996; Elliott 1999). Similarly, years of overfishing that depletes fish stocks have resulted in widespread concern that governments were not willing or able to resolve the problem (Phillips, Ward, and Chaffee 2003). Hence, environmental NGOs and other stakeholders in the forestry and fisheries sectors were motivated to create private governance schemes to compensate for what they regarded as insufficient public regulations.

NGO coalition building and producer targeting

In many policy fields, including the forest and fisheries sectors, policy networks have traditionally involved public authorities, industry associations, and trade unions, with

little participation from outside stakeholders such as environmental NGOs. If environmental NGOs want participation from industry associations and producers in new governance schemes, they have to challenge the exclusive rulemaking authority of these policy networks. Because such schemes ultimately depend on the collaboration of producers and other stakeholders, NGOs need to build new coalitions in favor of certification and labeling (Boström 2006). Such coalition building is likely to occur among powerful organizational actors like environmental NGOs, industry associations, and "green" companies, domestically as well as in important export markets. The inclusion of large, powerful organizations in the certification project can be expected to be essential in order to occupy the policy field. Such organizations include companies with financial resources and specific expertise (Cutler, Haufler, and Porter 1999), retailers with strategic positions along the market supply chain (Overdevest 2004), and social movement actors with "moral authority" (Hall and Biersteker 2002).

Besides building coalitions with powerful organizations, NGOs and advocacy groups are likely to target producers to convince them of the benefits of participation in certification schemes. Whereas states have the authority to make binding rules for natural resource governance and use, non-state certification schemes depend, in principle, on voluntary producer participation. In practice, NGOs expend considerable effort in persuading or coercing producers to sign onto certification programs, using a combination of "carrots" (e.g. reputational or economic benefits) and "sticks" (e.g. threats of boycott campaigns). Producers can be regarded as utility-maximizing actors that need to be convinced of the economic or reputational benefits of certification and labeling. Because participation in fisheries and forest certification schemes requires producers to undertake costly management changes they would otherwise not pursue, they can be expected to calculate their cost of and their gain from seeking certification. In addition to the lure of a price premium on eco-labeled products, incentives for participation can take the form of prospects for greater market access or prevention of consumer boycotts.

Transnational activist networks use a range of strategies to create demand for the certification and labeling schemes they support, including the naming and shaming of producers using practices with which they disapprove. According to Haufler (2001), the threat of advocacy group shaming is a major driver of participation in such voluntary private sector programs. Environmental groups in support of the MSC will target those who harvest the fish, retailers such as Wal-Mart, seafood restaurants, and consumers

who buy fish and fish products. Similarly, environmental groups in support of FSC will target forest owners and forest companies, commercial purchasers of paper such as publishing houses, retailers such as Ikea and Home Depot, and consumers who buy forest products. However, NGOs must balance the threat of boycotts and negative campaigns for those who do not participate with coalition building and positive incentives, as their ultimate goal is to convince producers of the benefits of participation. The causal mechanism at this stage, then, is primarily the restructuring of incentives for producers that are considering whether or not to sign onto certification programs. In the long run, however, successful coalition building could result in the development of shared beliefs, values, and objectives (cf. Sabatier and Jenkins-Smith 1999) and influence producers' evaluations of appropriateness.

Industry structure

The effect of NGO targeting is likely to vary among industries and countries. Cashore and colleagues (2004) found that the size, ownership, and export dependence of an operation are likely to affect its vulnerability to NGO targeting. Because of their public and market exposure, large, vertically integrated forest companies involved in timber extraction, processing, and sales are more likely to acquiesce to pressure to participate in FSC than are small forest owners. Furthermore, economies of scale render it less costly for large companies to adopt the relatively stringent FSC standards, prepare for certification processes, and respond to certification audits. Dependence on environmentally concerned export markets also influences adoption choices; producers dependent on environmentally sensitive export markets are more likely to certify in hopes of avoiding transnational NGO boycotts and loss of market shares (or to increase sales) than are those who sell primarily in a domestic, more easily pacified market.

Cashore and colleagues (2004) also found that forest companies and forest owners in a country with diffuse or nonexistent producer associations are more likely to sign onto FSC than are those in a country with strong and unified producer associations. A producer-dominated FSC competitor is more likely to emerge in countries or regions with strong, well-organized associations because a strong associational system is better able to stave off NGO pressure to participate in FSC by undertaking collective and strategic industry responses.

From a commodity supply chain perspective, large companies can dictate the terms of buying and selling arrangements up and down the supply chain, resulting in

demand for certification (Overdevest 2004). Thus the Unilever food conglomerate, which partnered with WWF to create MSC, is well placed to promote certification in the fisheries industry. Horizontal modes of diffusion can result from advocacy group targeting of companies such as supermarket chains or seafood restaurants at the same level in a supply chain (Sasser et al. 2006; Auld, Gulbrandsen, and McDermott 2008). Accordingly, I expect that variation in industry structure across sectors and countries is likely to result in different responses to NGO pressure to certify.

Government support

The rise of transnational corporations, the growth of non-state actors, and the diffusion of power in a globalizing economy is sometimes seen as evidence for "the retreat of the state" in world politics (Strange 1996). More specifically related to the proliferation of institutions for non-state governance, there is talk of "crowding out" traditional command-and-control instruments and public policies (e.g. Clapp 2005). Yet governments continue to regulate businesses, investors, communities, citizens, and natural resource use through legal systems, property rights, taxation, planning rules, and the like. States remain the primary units of the international systems through which political competition and mobilization are channeled. And most students of international relations would agree that states have legitimate rulemaking authority over and beyond non-state actors and institutions. I expect, therefore, that government support or lack of support may facilitate or hinder the proliferation of non-state certification schemes.

There are several ways that states could influence the emergence and spread of non-state governance schemes. (1) They could grant legitimacy directly to non-state governance institutions by delegating rulemaking authority (Cutler, Haufler, and Porter 1999), or more indirectly by expressing moral support for the institutions (Boström 2003b). Government support could enhance the credibility of private schemes and strengthen perceptions that pursuing the certification track is appropriate action for environmentally concerned companies. (2) States could facilitate market acceptance of certification and labeling schemes through public procurement policies. Of course, if governments favor one certification scheme over another in public procurement policies, it would be a strong signal to firms considering various options. States could also impede the spread of non-state governance schemes by rejecting particular schemes or labels, as witnessed when the British government concluded in 2004 that several forest certification schemes did not meet public procurement requirements for timber

from legal and sustainable sources (Gulbrandsen and Humphreys 2006). (3) States could facilitate private sector governance schemes at a more practical level by tendering knowledge, expert advice, and financial support in the development and implementation of such initiatives (Boström 2003b). I expect that these forms of government support will facilitate the emergence and proliferation of non-state certification and labeling schemes. In sum, government support is likely to influence not only producers' cost-benefit calculations concerning participation in certification schemes, but also their evaluations of legitimacy and appropriateness.

3.2 The organization of standard-setting processes

Non-state standards institutions constitute governing *arenas* that assemble various stakeholders, regulate their interactions, and provide opportunities for learning and mutual adaptation of behavior. When we talk about an institution as a governing arena, we are interested in "the access of actors to problems and the access of problems to decision games" (Underdal 2002: 24), as well as processes of learning, inclusion, and adaptation (Bernstein and Cashore 2007). Governing arenas must have mechanisms for aggregating preferences into collective decisions such as decision rules and procedures. Standard setters must also decide on the type of actors that should be allowed to participate in rulemaking, and what role they should play in the governance process. In this section, I examine how organizational design is likely to influence standard-setting processes and outcomes.

Organizing the rulemaking process

The manner in which rules are developed and agreed upon can be expected to distinguish legitimate rules from those lacking legitimacy (Breitmeier, Young, and Zürn 2006: 91). I expect that the level of *inclusiveness* in standard-setting projects is particularly important for the unfolding of the process and what it produces. Inclusiveness refers to the degree to which a broad range of stakeholders is included in standard development and on the governance bodies of standards organizations. Participation by a broad range of stakeholders, representing economic, ecological, and social interests, can be expected to enhance the legitimacy and credibility of a certification scheme among local communities, professional purchasers, customers, and the general public. Environmental NGO participation is likely to be particularly

important owing to the "moral authority" (Hall and Biersteker 2002), specific expertise, and "symbolic capital" (Boström 2006) of NGOs in the environmental realm.

On the other hand, producers can be expected to operate under the belief that those who must actually implement sustainability standards ought to develop or significantly influence the standards (Cashore, Auld, and Newsom 2004). If producers feel excluded from standard development or deprived of real decision-making power, they are more likely to leave the process. There could also be a tradeoff between inclusiveness and decision-making efficiency; with an increasing number of participants involved in standard-setting processes, it may become more difficult to agree upon standards and governance procedures. The analysis must therefore be sensitive to the interacting effects of the various variables, where one variable may pull in one direction and another variable may pull in the opposite direction.

The outcome of the standard-setting process is likely to depend upon participation patterns. When industry associations and producers dominate rulemaking, their interest in keeping adoption costs as low as possible would suggest that the standard-setting process is likely to result in relatively flexible and discretionary standards. By contrast, the outcome in a multi-stakeholder arrangement is likely to be more stringent standards, because environmental NGOs tend to advocate relatively demanding environmental protection measures and base their arguments on specific knowledge claims supporting such measures. I expect that producers who participate in inclusive, multi-stakeholder, standard-development arrangements are more likely to accept stringent standards than are those who participate in industry-dominated arrangements. This acceptance can result from negotiations and social interactions with NGOs and other stakeholders that are likely to advocate stringent standards. Producers who believe that the standards have emerged from a process that is fair and equitable can also be expected to be more likely to accept stringent standards than are those who feel no sense of ownership of the outcome (cf. Franck 1990). Hence, social interactions and collaboration in standard-development processes may contribute to learning among the participants and a redefinition of their interests.

Organizing for accountability

Whereas the literature on accountability has tended to focus on accountability structures and mechanisms in democratic nation-states, globalization processes and transboundary challenges have led to the emergence of governance arrangements beyond the nation-

state and to a renewed interest in accountability among scholars. Accountability is a source of democratic legitimacy, not only in nation-states but also in new forms of transnational governance arrangements. As Grant and Keohane (2005: 1) have stated: "If governance above the level of the nation-state is to be legitimate in a democratic era, mechanisms for appropriate accountability need to be institutionalized".

The creation of non-state standards organizations can be seen as an effort by civil society organizations or industry associations to institutionalize accountability mechanisms beyond the nation state. These organizations cannot simply replicate the traditional, territorial accountability structures in democratic states (cf. Grant and Keohane 2005), but they could create new tools and mechanisms that could be more effective in holding producers to account than could traditional government regulations. One way to organize for accountability is to create requirements and procedures to enhance the *answerability* of producers that adopt standards and to enhance *control* over them. Producers that adopt certification standards must consent to regular inspections of their practices and must accept the consequences of noncompliance. A certificate from a credible organization may, in turn, reassure relevant constituents and market players that a company is assuming responsibility for its conduct.

Another way to enhance accountability is to create an organizational capacity for *responsiveness* to relevant constituents. In the absence of the exclusive rulemaking authority of the state, a non-state standards organization must depend on the voluntary participation of producers and must be granted legitimate rulemaking authority from all the stakeholders it claims to represent. Just as public agencies must be responsive to the needs of clients, "customers", and the general public, a standards organization must be responsive to a broad range of stakeholders and manage the diverse expectations generated outside the organizations (cf. Romzek and Dubnick 1987, 1994). An organizational capacity for responsiveness to clients and external constituents could be enhanced by such measures as including relevant groups in the standard-setting process, consultation with stakeholders in certification proceedings, transparent decision making, opportunities for complaints, and procedures for dispute resolution.

In short, I expect that standards organizations can enhance accountability through instrumental organizational design. However, sociological institutionalists remind us that organizations may adopt certain procedures and tools because the actions of an entity must be acceptable or appropriate within a certain institutional framework. From this perspective, particular accountability recipes could be seen as "rationalized

myths" (Meyer and Rowan 1977) that spread rapidly in both private and public organizations. It is interesting to explore, then, not only *how* standard setters organize to enhance accountability, but also *why* they adopt certain accountability tools and *what* effects those tools have on producer behavior.

Organizing the science-policy dialogue

Science can be assumed to constitute a platform for discussing and negotiating standards. It would be difficult to imagine how standard setters could develop prescriptive rules about sustainable resource management in the absence of credible knowledge about the causes, consequences, and possible solutions of the environmental problem at hand. Although the influence of scientific knowledge in rulemaking processes must be investigated empirically, it seems safe to assume that science plays a role in the management of all diffuse, transboundary, and complex environmental problems.

In one sense, standard setting is a way of translating, simplifying, and transforming complex scientific, technological, or social knowledge to a set of explicit rules. Standard setters must understand, interpret, and operationalize knowledge, and must decide what knowledge to include and exclude in the process. Moreover, because certification standards are prescriptive rules that direct behavior – the assumption being that following the rules will result in environmental improvements or other benefits – standard setters need to convince producers and other target groups that the standards are based on the best available knowledge. Whereas scientific knowledge may or may not facilitate agreement on new standards, standard-setters can be expected to refer to science and expert knowledge in order to enhance the credibility of new standards and to convince relevant audiences that the standards are based on reliable and valid knowledge.

Work on the negotiated boundary between science and policy has challenged the idea of an objective science disassociated from the political struggles of interest groups and governments as well as the assumption that science speaks truth to power (e.g. Jasanoff 1987, 1990; Litfin 1994; Underdal 2000; Mitchell et al. 2006). The stakeholders who make policy-relevant knowledge claims are more numerous and heterogeneous than ever before, and the process of translating knowledge to rules and policies is becoming increasingly complex (Gibbons et al. 1994; Nowotny, Scott, and Gibbons 2001). Science often seems to be contested and politicized in modern society;

scientific knowledge may even worsen political controversies about environmental policies (Sarewitz 2004). Yet, science seems to play a critical role in the expansion and proliferation of standardization processes. The success of new organizational recipes lies, in part, in their grounding in organizational ideas associated with modern institutions of science, rationality, universalism, and homogeneity (Meyer and Jepperson 2000).

I expect that the emergence of non-state standard-setting projects creates a growing role for actors outside the traditional research sector to produce and use knowledge that can influence environmental rules and institutional design. Traditional policymaking systems in the forestry and fisheries sector can be described as *hierarchical systems* (cf. March and Olsen 1989) in which participation to the science-policy dialogue is controlled by public authorities. These systems have traditionally been dominated by public authorities, industry and trade associations, and scientific communities with privileged access to the science-policy dialogue. By contrast, multi-stakeholder standard-setting systems can be depicted as open or *loosely structured systems* (cf. March and Olsen 1989), with few formal or practical barriers for stakeholders who seek to provide scientific input. I expect that multi-stakeholder standard-setting projects will give environmental stakeholders wider access to the science-policy dialogue than traditional policymaking has done, owing to the differences in organizational form. Whereas environmental stakeholders have traditionally had limited access to the science-policy dialogue in public rulemaking processes, they participate on a level playing field in multi-stakeholder standard-setting projects. In industry-led programs, however, environmental organizations can be expected to have limited access to the science-policy dialogue.

3.3 The effectiveness of non-state certification schemes

Beyond serving as governing arenas, some non-state governance schemes also qualify as organizational *actors* with the capacity to direct the behavior of organizational members. Standards are "soft regulations" existing outside organizations and issued without the authority that managers are granted within organizations (Ahrne and Brunsson 2004), but standard setters often create formal organizations in order to enhance their capacity to act. In the following, I examine how producer participation, the stringency of standards, system operation, and consequences of noncompliance can be expected to interact and influence the effectiveness of certification schemes.

Producer participation

In principle, participation in certification schemes is voluntary. The more producers that participate in a certification scheme, the more likely it is that it will change widespread producer practices. Without a critical mass of producers, a voluntary scheme is unlikely to change producer practices in ways that lead to improvements in the biophysical environment. Accordingly, the adoption of a certification scheme can be expected to influence its problem-solving effectiveness. In addition to considering measures such as forest area certified and the proportion of certified to uncertified forests, however, it is critical to examine *patterns of standards adoption*. Because participation in certification schemes is voluntary, it is possible that only producers who face relatively low costs of standards adoption choose to participate. If producers who face substantial compliance costs were to systematically opt out of certification schemes, the net impact of certification would be low (Auld, Gulbrandsen, and McDermott 2008). Patterns of adoption can be expected to be related to the stringency of the standards, which I turn to next.

Stringency of the standards

The stringency of certification standards is likely to be critical for the environmental problem-solving capacity of a certification scheme. By stringent standards, I mean that they are prescriptive and comprehensive, requiring forest companies to limit harvesting near rivers and protected areas for example, and fishing vessels to use particular fishing gear and methods. As a point of departure, we may expect that the more stringent the environmental standards, the greater the likelihood that they would change forestry and fishing practices in ways that lead to environmental amelioration. Stringent certification standards may compel producers to go beyond compliance with public rules and undertake costly reforms that they otherwise would not pursue. A standard requiring large forest set-aside areas, for example, would preserve larger high conservation-valued forest areas than would a less stringent standard. Although we should not expect a linear relationship between standard stringency and impact on the biophysical environment, stringent standards are likely to increase the ameliorative effects of a certification scheme on producer practices.

On the other hand, stringent standards could also have negative effects on the overall effectiveness of certification schemes. First, there could be an inverse relationship between stringency and the adoption of schemes by producers, because

producers do not necessarily accept schemes with demanding and intrusive standards (Cashore, Auld, and Newsom 2004; Gulbrandsen 2004). Unless participation in schemes with stringent standards is rewarded is some way, we may expect that the more stringent the certification standards, the less likely it is that a wide range of producers is willing to participate voluntarily. More specifically, we may expect that only environmental frontrunners, which could adopt standards without having to undertake costly management reforms, would find it attractive to participate in a scheme with highly demanding and prescriptive standards. Enthusiasm for stringent certification schemes among environmental laggards, where the need for changing management practices is more urgent, can be expected to be low. Consequently, stringent standards could reduce the scheme's capacity to attract widespread participation from producers and to change broad-scale management practices, which would obviously impede the scheme's environmental problem-solving capacity.

Second, there could be an inverse relationship between compliance and the stringency of the standards, because producers do not necessarily have the *capacity* to implement and comply with highly demanding standards. Even if producers would like to change management practices and comply with stringent standards, they may fail to do so simply because the standards are too demanding. As a result, the level of noncompliance can be expected to be higher in schemes with stringent standards than in schemes with lenient standards.

Third, it is critical to recognize that standards are not neutral; the first movers who create the rules can tailor them to match their technical and operational capacities, resulting in higher switching costs for late movers (Mattli and Büthe 2003; Auld, Gulbrandsen, and McDermott 2008). Accordingly, standards secure advantages for certain producers and disadvantages for others, and stringent standards could be tailored to enhance the competitive advantages of first movers.

To summarize, I do not expect to find a simple relationship between stringency and effectiveness. On the one hand, stringent standards could direct producers' behavior and force them to undertake reforms they otherwise would not pursue; on the other hand, there could be an inverse relationship between stringency and producer participation and, likewise, between stringency and compliance. The empirical analysis will have to shed light on when, and under what conditions, stringent standards are likely to result in changes in problem-relevant behavior among a wide range of producers – not merely among environmental frontrunners.

System operation

A certification scheme may be performance based (focusing on outcome), management-system based (focusing on process), or based on some combination of the two. In a performance-based scheme, compliance with standards must be verified in on-the-ground audits. When performance-based standards are assessed, the forest or fishery itself is evaluated. For example, a certifier may inspect a forestry organization to ascertain if it has set aside primary forests of a certain size or a certifier may inspect a fishing vessel to see if appropriate fishing gear and practices are in use.

By contrast, a management-system-based scheme does not dictate compliance with any specific performance level before issuing a certificate, but requires that continual process improvements be demonstrated in audits. When system-based standards are audited, it is not the forest or fishery that is assessed, but the forest or fishery management system. For example, a certifier may inspect an organization to see if it has implemented adequate management plans, internal monitoring systems, and reporting procedures. An undertaking certified in accordance with system-based standards is usually required to have an environmental policy and goals in place, but can generally decide the environmental performance level it aims for. The management-system-based approach is sometimes perceived as being more dynamic than performance-based systems because of the requirement for continuous improvement rather than clearly defined and in some cases static criteria.

On the other hand, management-system-based certification has been criticized for providing little incentive for firms to go beyond the minimum requirement of meeting domestic laws and regulations (e.g. Clapp 2005). Moreover, compliance with these standards can, in principle, be verified without a visit to the forest or the fishery. Because performance-based schemes require compliance with substantive on-the-ground standards, we may expect that they are more likely to modify forestry and fisheries practices in ways that lead to less environmental deterioration than will management-system-based schemes.

Compliance with the standards, rules, and policies of non-state standards organizations may be based on first-party verification (self-inspection), second-party verification (inspection by an industry or trade association), or third-party verification (inspection by an independent auditor). It is generally assumed that third-party audits of management practices and performance would constitute a stronger push toward compliance than would first-party or second-party inspections.

The assumption that third-party auditing will result in improvements is essential to all certification schemes, but auditing practices are likely to vary among schemes. Regular third-party audits by independent certification bodies could enhance compliance with standards and continuous performance improvements in certified companies. On the other hand, if auditing practices are lenient or based on highly discretionary standards, obligations to report performance and verify compliance with standards could merely become ceremonial rituals aimed at justifying the business-as-usual situation (Power 1997). In this view, prescriptions about consultation with stakeholders in standard-setting processes, accreditation of independent certifiers, third-party auditing, and the like are rationalized myths that spread rapidly in both public and private organizations. Thus the analysis needs to explore the *behavioral* consequences of the certification and auditing process, to which I turn below.

Consequences of noncompliance

From the perspective of rational institutionalism, the key to achieving high levels of compliance lies in the role of enforcement; to be an effective certification scheme, the consequences of noncompliance with certification standards must be tangible enough to increase the costs of noncompliance and thus deter violations of rules (Breitmeier, Young, and Zürn 2006). In the case of noncompliance, the certification body would normally issue so-called Corrective Action Requirements and give the producer sufficient time to improve operations, but the certification body may also suspend the certificate if the producer fails to correct serious breaches with standards. In some schemes, the consequences of failing to comply could also lead to expulsion from an industry association.

As a point of departure, I expect that the more serious the consequences of noncompliance, the greater the potential to change behavior and the more effective the certification scheme will be. Failure to comply with certification standards may not only result in the loss of a certificate, but could result in loss of reputation and trust. If, on the other hand, there are no tangible consequences for noncompliance, certified producers would, from the rationalist perspective, have no incentive to change their practices in order to comply with demanding standards. Among the causal mechanisms believed to mediate between a certification scheme and improved environmental practices in forestry and fisheries, auditing largely involves the restructuring of incentives.

However, as a result of repeated interaction between producers, certification bodies, and other stakeholders, producers may begin to follow rules without considering if rule following is compatible with their material self-interest. This behavior would be consistent with what we would expect from actors motivated by the logic of appropriateness, and suggests that compliance verification becomes less important over time than does maintaining a dialogue with a wide range of stakeholders in order to meet their expectations and needs. Through their participation in certification schemes, producers, as stewards of natural resources, may internalize norms and rules about appropriate conduct, and incorporate compliant behavior into standard operating procedures. Resource managers may comply with rules because it is the right thing to do, or habitually, without case-by-case deliberations about the costs and benefits of compliance.

Engaging actors in such complex social networks as multi-stakeholder standard development and certification processes can produce positive results over and above the development of compliance mechanisms (cf. Reinecke 1998). As noted by Breitmeier and colleagues (2006: 155), the imposition of penalties or the provision of rewards may prove effective in eliciting compliance at the margin, but "even well-endowed public authorities would run into trouble right away unless most subjects complied with the relevant rules and commitments most of the time without regard to the impact of punishments and rewards". I expect, then, that engaging producers in standard-setting and certification processes can elicit compliance with rules and behavioral change, regardless of the character of the compliance system. Indeed, rational models of compliance-enforcement systems, if taken at face value, can have misleading practical implications and may even undermine the trust they are meant to build (Hasenclever, Mayer, and Rittberger 1997: 170). Expanded monitoring and auditing and rigorous compliance verification systems can lead to an ever-growing demand for more monitoring and auditing (Power 1997). The result could be that auditing becomes an end in itself rather than a means to change problem-relevant behavior.

4. Research design and case selection

The empirical part of this thesis consists of a collection of articles that examine the emergence and effectiveness of certification schemes. The following articles comprise the case studies of the thesis:

1. Gulbrandsen, Lars H. (2006) "Creating Markets for Eco-labeling: Are Consumers Insignificant?" *International Journal of Consumer Studies* 30 (5): 477–489.

2. Gulbrandsen, Lars H. (2008) "Accountability Arrangements in Non-State Standards Organizations: Instrumental Design and Imitation", *Organization* 15 (4): 563–583.

3. Gulbrandsen, Lars H. (2004) "Overlapping Public and Private Governance: Can Forest Certification Fill the Gaps in the Global Forest Regime?" *Global Environmental Politics* 4 (2): 75–99.

4. Gulbrandsen, Lars H. (2005) "The Effectiveness of Non-State Governance Schemes: A Comparative Study of Forest Certification in Norway and Sweden", *International Environmental Agreements: Politics, Law and Economics* 5 (2): 125–149.

5. Gulbrandsen, Lars H. (2008) "The Role of Science in Environmental Governance: Competing Knowledge Producers in Swedish and Norwegian Forestry", *Global Environmental Politics* 8 (2): 99–122.

6. Gulbrandsen, Lars H. (2005) "Sustainable Forestry in Sweden: The Effect of Competition among Private Certification Schemes", *Journal of Environment and Development* 14 (3): 338–335.

The first two studies examine the formation and design of forest and fisheries certification schemes at the global level. In Article 1, I investigate the role of consumers, companies, environmental organizations, and governments in the emergence and proliferation of non-state certification schemes. The spread of voluntary eco-labeling schemes is often seen as being driven by aspirations in the business sector in order to extract a price premium on eco-labeled products or to gain greater access to markets – and by consumer willingness to pay more for products carrying a credible label. A rational-economic perspective would lead one to expect that the spread of forest and fisheries certification is driven primarily by producers wanting to reap price premiums or to exploit competitive advantages, and is made possible by end-consumer demand. Drawing on an alternative approach in this article – an approach referred to as

"political consumerism" – I investigate what can be gained by viewing the market as a site for political activism and agitation rather than merely as a site for economic transactions. I am particularly interested in examining the relative importance of the environmental group targeting of producers in order to ensure industry participation in certification schemes, government support for private initiatives, and end-consumer demand. Through a careful examination of the initiation and spread of forest and fisheries certification schemes, this article opposes the view that the emergence of certification programs must be understood primarily as a market-driven phenomenon, with little influence for actors other than producers and industry associations.

In Article 2, I turn my attention to the organizational design of forest and fisheries certification schemes, and how it changes over time. The creation of non-state standards organizations could be seen as efforts by civil society organizations or industry associations to hold producers accountable for their environmental and social performance or nonperformance. A certificate from a credible organization may reassure relevant constituents and market players that a company is taking responsibility for its conduct. Yet it is unclear to whom the standards organization itself is accountable and what is the source of its legitimacy and rulemaking authority. I am particularly interested in exploring how non-state standards organizations *organize* rulemaking and governance to create legitimacy for their actions and a higher degree of accountability. I compare forest and fisheries certification schemes to determine if the same mechanisms can explain the organizational design and evolution of certification schemes in two different sectors.

Article 3 examines the relationship between forest politics and forest certification at the global level, particularly on the ability of forest certification to amend the omissions of international agreements pertaining to forestry. The purpose of this study is to explore the relationship between public and private governance instruments and to identify how, and under what conditions, non-state certification schemes can be effective as institutions for environmental governance. My point of departure is that non-state governance can be seen as an extension of intergovernmental efforts to enhance environmental protection in forestry, in the sense that private actors step in where public authorities have not succeeded in agreeing on precise and stringent rules and fill in the gaps by setting new rules and standards. I begin by reviewing the achievements and limitations of international efforts to protect forests and promote sustainable forest management. Next, I compare various certification schemes within

the forestry sector, and investigate whether or not they can be regarded as successful private sector responses to the inadequate international legalization in the forestry sector. Most studies have identified certification as being in opposition to intergovernmental cooperation on forests, rather than complementing it. By contrast, this study opposes the view that non-state governance schemes challenge traditional government authority, by showing that such schemes can fill some of the gaps in intergovernmental efforts to protect forests and promote sustainable forest management. I argue that private policy instruments tend to supplement rather than supplant traditional public policy regulation, and that forest certification should be understood as complementing international agreements pertaining to forestry.

Studies 4 through 6 examine various aspects of forest certification in Norway and Sweden on the assumption that understanding the emergence and effectiveness of forest certification requires detailed case studies. Norway and Sweden are particularly deserving of in-depth study for several reasons. First, they have been at the forefront of developing and implementing forest certification schemes. This early move makes it possible to study non-state rulemaking and enforcement and public-private governance interactions over roughly a decade, from the initiation of non-state rulemaking projects in 1994 to the situation with highly institutionalized and advanced governance systems in 2005. Second, forest certification processes evolved very differently in the two countries. In Norway, almost all productive forestland is certified in accordance with the environmental management system (EMS) standard, ISO 14001, and the nationally developed Living Forest certification scheme. By contrast, the FSC has certified about 40 percent of the Swedish forestland, and it is considerably larger than a competing, landowner-dominated scheme in Sweden. Third, Norway and Sweden are advanced, industrialised economies with a high profile on environmental protection issues, and both countries have a substantial forest industry, providing an opportunity to study the relationship between environmental and economic interests and well-established administrative traditions when new governance arrangements are introduced in a specific policy field. Fourth, there are some salient structural differences, such as industry structure and ownership patterns, between the Norwegian and Swedish forestry sectors, providing an interesting point of departure for comparing forest certification processes. In sum, Norway and Sweden are interesting to compare, not only because of the many similarities they exhibit, but, crucially, because of their differences with regard to the development and proliferation of forest certification schemes.

In Article 4, I compare and contrast the emergence and effectiveness of forest certification schemes in these two countries. Although the two countries are compared to explore the emergence and effectiveness of different forest certification schemes, the observed differences are also an interesting point of departure for exploring similarities in non-state-driven rulemaking processes (cf. Ragin 1987). In addressing these issues, I examine a number of variables that influence forest certification choices and the effectiveness of certification schemes, particularly the initiation of certification processes, inclusiveness in standard development, individual or collective participation in certification schemes, system operation, and stringency of the standards.

Article 5 examines the influence of scientific knowledge in the development of environmental protection measures in Swedish and Norwegian forestry. The objective is to determine if differences in the environmental stringency of forest policy and certification standards can be explained by a variation in the state of knowledge about environmental protection needs, the access of various stakeholders to the science-policy dialogue, or the relationship of the environmental problem and its solutions to the distribution of costs and benefits in the forestry sector. In exploring these questions, I compare the influence of various knowledge producers in state-driven and non-state-driven rulemaking processes to enhance environmental protection in forestry. State-driven and non-state-driven processes are interesting to compare because the emergence of non-state forest certification schemes may have changed the conditions for knowledge producers and stakeholders to influence rulemaking. Whereas policymaking in state-driven processes is typically highly institutionalized, there are usually few formal or practical barriers for stakeholders who seek to provide scientific input in non-state-driven rulemaking processes. As a result, knowledge producers that usually have been more or less excluded from traditional policymaking processes may instead be able to influence rulemaking in new types of environmental governance projects. Because forest certification requires the translation of complex and often uncertain knowledge into concrete certification standards, it is interesting to explore the influence of competing knowledge producers such as environmentalists and forestry interests in standard-setting processes.

In Article 6, I investigate the implementation of two competing forest certification schemes in Sweden. In many ways, Sweden provides what could essentially be called a test-tube environment for studying the implementation of forest certification programs and the effects of competition among forest certification

schemes. As a major exporter of paper and other wood-based products, it is essential for Swedish forest companies and forest owners to demonstrate to customers that they comply with sustainable forest management standards. Whereas Swedish forest companies are certified in accordance with the FSC standard, the Swedish forest owners' associations rejected FSC and created their own forest certification scheme. This situation makes it possible to compare the effectiveness of two competing forest certification schemes and to examine how they influence one another. The aim of this article is to explore how we can examine the effectiveness of forest certification as an institution of environmental governance. Specifically, I assess whether or not certified forest companies and forest owners go beyond compliance with legal requirements on environmental protection in forestry, and I examine unintended consequences of certification (shifting alliances, prevalence of conflict in the forestry sector), as well as the effects of competition among certification schemes.

In sum, in this thesis I have studied the emergence and effectiveness of forest certification from the global to the domestic level. In addition, forests and fisheries certification are compared at the global level, in order to provide a fuller and richer account of the ways in which non-state governance schemes emerge and organize standard setting and enforcement. This combination of comparisons across governance levels and sectors helps to strengthen the reliability and validity of the findings.

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I

II

III

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VI

Conclusions

The main contribution of this thesis has been to investigate, theoretically and empirically, an under-explored area of contemporary environmental politics: the formation and effectiveness of private-sector or non-state governance institutions. In this chapter, I review and discuss results from the articles that comprise the empirical part of the thesis. Because I present results and discuss conclusions in each article, the purpose of this chapter is to review and discuss some overarching themes and findings in light of the research questions. Recall the broad research questions I have examined:

- How can we explain the emergence and spread of non-state certification schemes in the forestry and fisheries sectors?
- How and to what extent does the organization of standard-setting processes influence standard-setting outcomes?
- What are the causal mechanisms that link certification schemes and behavioral change; and when, and under what conditions, are these mechanisms likely to influence behavior?

In examining these questions, I have drawn upon insights from the regime literature, which typically focuses on states and their interactions in international environmental regimes; and from sociological institutionalism, which typically focuses on organizations and institutional environments. I have also reviewed literature on multilevel governance and global governance. Although this literature has been helpful in turning our attention to the multitude of governance arenas in a transnationalizing world, there is no coherent theory of multilevel or global governance that could help us predict or explain the emergence and effectiveness of non-state governance schemes. In short, the multilevel and global governance literature does not provide us with the analytical tools that could help us to generate nontrivial propositions about institutional formation and effectiveness. I contend, therefore, that rational institutionalism and sociological institutionalism are more fruitful

points of departure for identifying causal mechanisms and pathways that could mediate between institutions and behavioral outcomes. Nascent, empirically grounded work on non-state governance, social and environmental certification, and NGO activism helped me to specify the scopes of validity for the theoretically based causal mechanisms. Drawing on this work, I have investigated when and under what conditions the causal mechanisms are likely to influence the formation and effectiveness of non-state certification programs. Within this context, I discuss in the following results that shed light on each research question.

1. Institutional emergence

1.1 Inadequate public regulations

Certification and labeling in the forestry and fisheries sectors developed from concerns about environmental degradation, resource depletion, and insufficient governmental action to address the problems. After decades of intensive commercial exploitation and industrial logging, the problems facing forests – deforestation, environmental deterioration, and loss of biodiversity – rank among the world's worst environmental problems. Despite increasing concern over global forest degradation and deforestation in the tropics, states have failed to agree on a legally binding global agreement for the protection and sustainable use of forests. Following years of discussion and numerous failures to develop a legally binding forest agreement in the shape of a forest convention or protocol to an existing convention, many NGOs hoped for a breakthrough at the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro. They were to be disappointed yet again, however, when the conference resulted in a statement of forest principles that was not legally binding. The NGOs had also become frustrated with the failure of the International Tropical Timber Organization (ITTO) to promote tropical forest protection. In the absence of governmental action on forests, they decided that a governance scheme to prevent irresponsible logging and reverse environmental degradation of forests would have to be established by private initiative. Forest certification was thus launched as a market-based tool that could provide more stringent and wider-ranging sustainable forest management rules than those agreed upon by governments. The creation of the Forest

Stewardship Council (FSC) should be understood, then, as a response from the World Wide Fund for Nature (WWF) and other NGOs to the lack of success on the part of states to negotiate a legally binding global forest agreement (Article 3). The goal of the NGOs was to harness market forces to steer forest companies and forest owners toward sustainable practices.

Similarly, the establishment of the Marine Stewardship Council (MSC) was a response to increasing concern over the depletion of natural resources and the unwillingness or inability of governments to resolve the problem. Overfishing, resulting primarily from an overcapacity in the world's fishing fleets following years of expansion, has depleted fish stocks and habitats. It remains the most serious problem in fisheries management within national waters (the 200 nautical mile exclusive economic zone of coastal states) and in waters outside national jurisdiction (the high seas). Driven by the rapid growth of the world's fishing fleets, the harvest tonnage from capture fisheries quadrupled between 1950 and 1990, but has since leveled off or even declined (FAO 2002). In addition to threatening the reproductive powers of a fish stock, overfishing affects ecosystems through habitat degradation, vessel pollution, and by-catches of non-targeted species. Indeed, there is talk among fisheries scientists of a global crisis in marine capture fisheries (Watson and Pauly 2001). In response to the increasing concern over the inability of governments to resolve the fisheries' management challenges, fisheries certification was introduced to improve management practices, methods of operation, and the status of seriously depleted fish stocks and habitats.

In sum, intergovernmental efforts on behalf of forests and fisheries were important for certification initiatives, in what they did and did not produce. Whereas forest certification was a response to the lack of legally binding international rules on forests, fisheries certification emerged to supplement what was perceived by NGOs to be inadequate international rules to address the challenges facing fisheries.

1.2 NGO coalition building and producer targeting

The proliferation of voluntary certification programs for environmentally and socially responsible production is often seen as being driven by producers who seek to reap market benefits and extract a price premium from labeling. By contrast, I found that most

producers decided to participate in such schemes only after intensive NGO campaigns (Article 1). As expected, coalition building among actors seeking to convince producers of the benefits of certification was crucial in creating support for FSC. WWF and other environmental NGOs worked systematically to build coalitions in support of the FSC and to include in the coalitions such powerful retailers as Ikea; Home Depot in Canada and the United States; and the British-based home center, B&Q. We have seen that WWF established the first buyers' group to create demand for sustainably sourced wood among retailers in the UK as far back as 1991, even before the FSC was up and running. Similar buyers' groups were established in a number of other countries. WWF also formed a powerful alliance with retailers through the Global Forest and Trade Network to promote FSC-certified products. With 22 national Forest and Trade Networks and activities in about 30 countries, WWF had considerable success in creating demand for FSC-certified products, although primarily in Europe and North America.

There were less NGO activism and direct targeting of producers to persuade them to participate in fisheries certification schemes. Instead, WWF partnered with the major corporation, Unilever, to create MSC, creating a powerful alliance with one of the world's largest buyers of frozen fish from day one of the scheme's existence. Although MSC became independent of its two founders after its two first years of operation, WWF and Unilever continued to support the scheme actively. These two partners also worked with MSC to convince supermarket chains of the benefits of supplying MSC-labeled products – calling them the "The Best Environmental Choice in Seafood". They had some success in the UK, where the leading supermarket chains, Marks & Spencer, Sainsbury's, Tesco, and Safeway stock MSC-labeled products, and in a few other European countries. A major breakthrough in the USA came in 2006 when Wal-Mart, the world's biggest retailer, announced its commitment to source 100 percent of its fresh and frozen seafood supplies in North America from MSC-certified sources within five years.

Although the MSC supporters used a less confrontational strategy in creating markets for fisheries certification than FSC supporters did for forest certification, building coalitions and creating alliances in favor of certification project were crucial in both cases (Article 1). As both are not-for-profit organizations with small budgets and limited marketing capacity, MSC and FSC were dependent upon alliances with environmental

NGOs, retailers, and donors. Indeed, in the absence of strategic bargaining positions within well established producer and supply-chain networks, support from environmental NGOs and strategic alliances with powerful retailers were essential in convincing producers to sign onto the schemes. Consumers' actual buying behavior or willingness to pay a price premium for eco-labeled products was less important for the emergence of forest and fisheries certification schemes. Nonetheless, environmental groups would certainly have had less success in their efforts to create markets for eco-labeling without the threat of consumer boycotts or the hope of price premiums or greater market access.

1.3 Industry structure

The size, ownership, and export dependence of an operation affected its vulnerability to NGO targeting. Variation in *forest industry structure* emerged as a particularly significant variable for explaining divergent forest certification choices in Sweden and Norway (Article 4). Whereas the big, export-dependent Swedish forest companies responded to advocacy group and market pressures by adopting the relatively stringent FSC standards, non-industrial forest owners in both Norway and Sweden rejected this scheme because of narrower market exposure and their belief that the FSC standards were unsuited for certification of small-scale non-industrial forestry. The non-industrial forest owners responded collectively to NGO pressure to adopt the FSC standards by creating landowner-dominated schemes with more discretionary and flexible standards. Their strong associational systems facilitated collective and strategic responses to NGO pressure to certify.

The processes investigated here also show that path dependencies occur and create effects that shape, constrain, and limit future policy choices (cf. George and Bennett 2004; Pierson 2004). As Cashore and colleagues (2004) have argued, certification choices at critical junctures create "lock-in effects" (Pierson 1993) that constrain future choices and increase the costs of changing the course. It was not predetermined that the Swedish forest companies would choose FSC certification merely because they were dependent on export markets and were exposed to NGO pressures to certify. In fact, a number of forest companies in other countries – comparable to the Swedish companies in size and dependence on paper and wood products exports to environmentally sensitive markets –

rejected this program and worked instead to create industry-dominated schemes (Cashore, Auld, and Newsom 2004). When WWF proposed the establishment of a Swedish FSC working group, there was skepticism within the forest companies at first. The forest industry tried to create a Nordic Forest Certification Project, but that initiative failed, largely because it was boycotted by environmental NGOs in Sweden, Finland, and Norway. Instead of supporting the Nordic initiative, WWF and the Swedish Society for Nature Conservation (SSNC) went ahead and established a Swedish FSC working group, in which a written declaration of support for FSC's principles and criteria was a requirement of membership. Following publicly announced preferences for FSC-certified products by powerful buyers in the UK and Germany, two of the large Swedish forest companies, AssiDomän and Korsnäs, eventually decided that they would support FSC certification in Sweden. Under pressure from these companies, all members of the Swedish Forest Industries Association collectively agreed to have the association represent them on the FSC working group (Article 4).

Similarly, small-scale forest owners in Sweden and Norway were not predestined to reject FSC certification merely because they were less exposed to NGO targeting and market pressure than the big forest companies were. Indeed, all the six regional Swedish forest owner's associations (representing the nonindustrial forest owners) agreed collectively to join the FSC working group and were close to accepting the proposed FSC standards. In the end, however, they withdrew from the working group, largely over disagreement with the environmental NGOs over the stringency of some environmental standards and because the Sami representatives were making demands related to reindeer herding on private forestland in the northern region that the forest associations could not accept. This decision paved the way for the creation of a landowner-dominated scheme in Sweden (Article 4; Cashore, Auld, and Newsom 2004). If the forest owners' associations had decided to remain on the FSC working group and continue the negotiations with Sami representatives and the other stakeholders, there may have been only FSC-certified forestland in Sweden today rather than two competing schemes.

My argument is not that structural variables were unimportant for certification outcomes; the size, ownership, and export dependence of an operation clearly influenced certification choices. Rather I want to stress that structural variables did not fully determine

certification outcomes. Standard setting is a bargaining process and the outcome is a result of framing activities, power struggles, and competition for influence among various stakeholders. We have seen that the strategies and actions of standard setters influence the way the standard-setting process unfolds. In Sweden, the WWF initiated a FSC working group, worked systematically to create a coalition in support of FSC certification, and succeeded in persuading the big forest companies and the forest owners' associations to participate in the working group. By contrast, the forest owners' associations initiated the Norwegian Living Forests project and assumed leadership in the standard-setting process. These associations had the upper hand in Norway, and NGO efforts to convince the forest owners of the benefits of FSC certification never succeeded.

1.4 Government support

In the global governance literature, the emergence of transnational advocacy networks, private authorities, and non-state governance schemes is often taken as evidence supporting the claims that the state is less powerful than it has been in the past and that authority is being relocated from public to private institutions (e.g. Keck and Sikkink 1998; Held and McGrew 2002; Rosenau 2003). In the Swedish and Norwegian forestry sectors, however, changes in public rules and regulations facilitated the emergence of non-state governance schemes, indicating that forest certification should be seen as part and parcel of a new approach to governance involving both public and private authorities. This approach is based on shared public and private rulemaking authority and cooperative partnerships complementing traditional top-down regulation. From the early 1990s onwards, public authorities in both Norway and Sweden wanted forest owners to assume greater responsibility for environmental care and protection in forestry. State agencies encouraged and supported the development of forest certification systems and assisted forest owners with practical implementation advice and information. Whereas the new forest policy in Sweden was part of a programme of deregulation and liberalization (Boström 2003), Norwegian forest owners had always enjoyed a great degree of freedom in managing their forests. In both countries, public authorities from the early 1990s onwards wanted forest owners to adopt a more serious attitude toward environmental care and protection. But they were careful to add that forest certification should act as a supplement to public policy

instruments and that the forest owners should decide for themselves on the type of certification scheme to be implemented.

The evidence supports the position that states, through the regulatory system and the political and administrative culture, influenced non-state rulemaking initiatives and encouraged private actors to participate in certification schemes and comply with certification standards (Articles 4 and 6; Boström 2003). By focusing predominantly on market dynamics and the strategies of non-state actors, many analysts of non-state governance schemes tend to ignore or downplay the role of the state and regulatory frameworks in the establishment and implementation of these schemes. Although NGO activism and market pressure have been important factors in the proliferation of certification programs, analysts would be well advised to pay attention to the legal, socioeconomic, and political contexts that facilitate or hinder successful implementation. There is a great deal of evidence to suggest that effective implementation of these programs requires well functioning legal systems, forest law enforcement, property rights, and national and local forestry administrations that work (Articles 3, 4, and 6).

In conclusion, non-state certification initiatives cannot fully supplant forest legislation and its enforcement by public authorities. In fact, their successful functioning seems, in part, to depend on such legislation and enforcement. Non-state certification schemes may do little, therefore, to improve the overall protection of forests or other natural resources in countries where governmental institutions, legislative frameworks, and law enforcement mechanisms are weak. This is a research topic in urgent need of closer examination.

2. Organizing standard-setting processes

2.1 Organizing the rulemaking process

I proposed that the organization of the standard-setting processes would influence standard-setting outcomes. One expectation was that inclusiveness in standard-setting processes would enhance the credibility and legitimacy of a certification scheme. Another expectation was that participation from environmental organizations would result in relatively stringent standards, whereas greater participation from business interests would result in standards

that are more lenient. We have seen that different interest groups struggle intensively to craft the rules and decision-making procedures of non-state governance schemes, indicating that there is a belief within interest groups that organizational arrangements are crucial to the operation, performance, and effectiveness of these schemes (cf. Boström and Klintman 2008). Their belief is, in other words, that the organization of rulemaking processes makes a significant difference in rulemaking outcomes. But does organizational form really matter in the sense of influencing standard-setting processes and outcomes?

A key finding from the case studies is that inclusiveness in standard development and operation enhances the legitimacy and rulemaking authority of non-state governance institutions. Whereas the state may grant rulemaking authority to private actors, the legitimacy of non-state governance schemes is largely determined by the evaluations of environmental organizations, producers, purchasers, and consumers. Because of the "symbolic capital" of environmental organizations, their support is vital for the legitimacy and rulemaking authority of non-state certification schemes. Environmental organizations could be seen as granting legitimacy to certification schemes in exchange for participation in the standard-setting process and, ultimately, for influence on producer behavior. Participation from producer associations could create a sense of ownership of the standard-setting outcome and enhance the legitimacy of the scheme among producers who would be required to comply with the standards.

In the case of FSC and MSC, participation from a broad range of environmental, social, and economic stakeholders enhanced the credibility of the schemes among professional customers and consumers, thus increasing supply-chain support for certification (Article 1). I also found that inclusiveness and interaction in standard development processes facilitated knowledge dissemination and learning among participants (Articles 4, 5, and 6). Inclusiveness in decision-making processes could be regarded as a way to enhance collaboration and problem-solving efforts among stakeholders with different interests. However, stakeholders who felt deprived of real decision-making power or who were unwilling to compromise with other participants left the standard-setting groups. As seen in the Swedish FSC process, the forest owners' associations decided collectively to leave the standard development group following disagreements with other stakeholders. In Norway, after having agreed with the forest

owners to back the Living Forest standards, the environmental NGOs declared a few years later that they no longer supported the certification scheme. They were concerned that the forest owners would not compromise on key environmental issues in the elaboration of the standards. Balancing the formal decision-making powers and rights of various stakeholders appears, therefore, to be crucial in non-state governance schemes. If business interests dominate rulemaking at the expense of other stakeholders, environmental and social movement groups are not likely to support the scheme. Conversely, if environmental and social movement groups dominate rulemaking, producers are unlikely to participate and implement the rules on a voluntary basis.

As expected, the empirical evidence shows that environmental standards are more likely to be stringent when environmental NGOs are systematically included in standard-setting processes. Conversely, the standards are more likely to be discretionary and flexible when organizational arrangements favor business actors at the expense of other stakeholders (Articles 3 and 4). In the FSC, WWF and other NGOs deliberately designed organizational arrangements and procedures to eliminate business dominance and to encourage collaborative rulemaking. Within the FSC, the environmental and social chambers (comprising two-thirds of the votes in the General Assembly) can always veto proposals they do not support. With only one-third of the votes in the FSC General Assembly, the economic chamber cannot dominate rulemaking in the scheme. By contrast, forest industries and landowners generally dominate rulemaking and governance in FSC competitors like the Programme for the Endorsement of Forest Certification (PEFC) In the PEFC Council, voting rights are based on the size of the forest owners' land, and environmental and social stakeholders have no formal voting rights. These different organizational forms have resulted in different types of standards and certification requirements (Article 2). Whereas FSC certification is generally based on prescriptive, performance-based standards, the producer-dominated schemes place greater weight on standards of procedure, organizational and management measures, and flexibility in applying the standards. In the fisheries certification scheme, MSC, ultimate decision-making authority rests with the appointed board of trustees, comprising members from industry, environmental NGOs, the scientific community, and the seafood retailers. The stakeholder council advises the board of trustees, but it cannot veto or overrule decisions

made by the board. Similar to FSC in forestry, MSC requires fisheries seeking certification to comply with substantive performance requirements; but its standards are narrower than FSC's standards, and exclude social issues such as indigenous peoples' and worker's rights. The upshot is that initiators of standard-setting programs must carefully consider the type of organizational arrangements that are most suitable for achieving their objectives. In general, including a broad range of stakeholders such as environmental and social NGOs in standard-setting projects is likely to enhance the legitimacy and credibility of the programs, but it is also likely to result in relatively stringent standards. Business domination is more likely to result in discretionary and flexible standards, but environmental and social stakeholder are less likely to support the standards and lend credibility to the scheme.

On the other hand, we have seen that producers do not always share identical interests. If consumers and retailers value environmentally responsible practices, environmental frontrunners in the business community could benefit from the adoption of stringent standards. Frontrunners can adopt certification standards without having to undertake costly management and behavioral changes, a position that obviously provides them with competitive advantage vis-à-vis producers who would have to undertake costly reforms in order to become certified. First movers can also shape the rules to match their technical and operational capacities, resulting in higher switching costs for late movers (Mattli and Büthe 2003). In Sweden, for example, the forest companies clearly regarded FSC certification as a competitive advantage when dealing with environmentally concerned export markets such as the UK and Germany. During the 1980s, as a result of such environmental reforms in the forest companies as the development of environmental management plans, the hiring of ecologists, and the education of personnel in ecology and environmental protection, they were well prepared for the adoption of the relatively stringent FSC certification standards. Whereas the Swedish forest companies could benefit from environmental preparedness and operations of scale, transaction costs for private forest owners practicing small-scale forestry would have been much higher (Article 4).

Similarly, various environmental NGOs do not always share the same interests, and sometimes disagree on strategies or objectives. The FSC is both a site of and a source of occasional conflict within the environmental community (Bartley 2007). Within the FSC, there is ongoing debate between WWF, an enthusiastic and pragmatic supporter of the

scheme, and critical insiders such as Greenpeace and the Rainforest Action Network. WWF would like to see the FSC develop into the world largest certification scheme, and has stressed the need for some flexibility to accommodate business interests. By contrast, Greenpeace and other environmental NGOs have argued for more stringent certification requirements, maintaining that FSC should be an exclusive scheme, in which only the best companies can participate. Conflict levels were highest at FSC's inception and have since abated somewhat, but the differing views on what the FSC should be and how it should develop are reflected in ongoing discussions within its council and other governing bodies. Other environmental organizations criticize the FSC from the outside. In one of the case studies (Article 3), I pointed out that the Rainforest Foundation, a nonprofit organization dedicated to rainforest protection, alleged in a voluminous 2002 report that FSC certification suffers from a number of unacceptable weaknesses. Although FSC responded that many of the allegations were inaccurate or outdated, the Rainforest Foundation declared that it still would not recommend FSC-certified tropical timber.

In sum, we see that there can be divergent interest not only among the various stakeholders, but also within the environmental community and the business community. It is evident, then, that when explaining the outcome of standard-setting processes, one must consider the *configuration* of interests within standard development coalitions. The case studies show that the greatest likelihood of business-environmental NGO agreement on relatively stringent standards occurs when there are producers who could benefit from adopting such standards. Given the credibility that environmental NGOs lend to the more stringent certification schemes, environmental frontrunners on the producer side tend to favor participation in such schemes. By contrast, those who favor more lenient and discretionary standards tend to prefer participation in producer-dominated schemes that give them smaller adoption costs and greater influence over standard-setting outcomes.

It is important to recognize, however, that standard setting is neither an isolated event nor a process with a final outcome (Auld, Gulbrandsen, and McDermott 2008). Standards are always negotiated and implemented in a specific context and standard setting is an iterative process involving adjustment, adaptation, and renegotiation of standards in light of new concerns, demands, and knowledge. We have seen that competition between NGO-backed and producer-backed schemes influences standard-setting outcomes (Article

6). The Swedish FSC standards were initially more stringent and prescriptive than were the standards created by the forest owners' associations. Given the competition for credibility, rulemaking legitimacy, and support from stakeholders, however, the two schemes have adjusted their standards and become more similar. Whereas FSC has adjusted its rules to better accommodate the needs of forest companies, PEFC has changed "upward" in an effort to enhance credibility among environmental NGOs and in the marketplace (Article 6; Cashore, Auld, and Newsom 2004). Rather than the two groups engaging in a "race to the top" or a "race to the bottom", the rivalry between the two schemes has resulted in some convergence and mutual adjustment of rules.

The Swedish case study shows that the difference between competing standards cannot be too great (Article 6). If a particular standard becomes too stringent, most producers will simply choose to participate in a competing standard. But if the competing standard is too discretionary and lenient, it is not likely to be supported by NGOs or the marketplace. As a result, competing standards are likely to influence one another and the space for making mutual adjustments. There is, however, a key difference between NGO-backed schemes like FSC and producer-dominated programs. Whereas FSC needs to demonstrate that it is "best in class" in order to retain environmental NGO support and credibility, producer-dominated schemes often need merely to convince important buyers that their labels are "better than average" or better than non-labeled products (cf. Cashore, Auld, and Newsom 2004; Boström and Klintman 2008). Because producer-dominated certification programs are dependent upon support from industry players and supply-chain actors, but not necessarily upon widespread support from environmentalists, they do not have to be more stringent than competing schemes. The motivation for creating producer-led programs was, after all, to create a more industry-friendly alternative to FSC. By contrast, the legitimacy of FSC rests on its being the most environmentally stringent and demanding certification program in the forestry sector.

2.2 Organizing for accountability

I have argued that FSC established a model for organizing accountability in non-state governance schemes. In the FSC, economic, social, and environmental stakeholders share decision-making power, participate in standard-setting processes, and must find

collaborative solutions to collective challenges and dilemmas. Such an organizational model empowers actors that have traditionally had little influence on the way companies and landowners manage forests. As seen in the FSC, a capacity for acting responsively to relevant constituents can be enhanced by including of a broad range of stakeholders in governing bodies, implementing transparent decision making and consultations in certification proceedings, and creating opportunities for complaints and procedures for dispute resolution (Article 2).

The producer-led forest certification schemes that emerged in opposition to FSC established an alternative organizational model, in which industry and business interests dominate rulemaking and are accountable primarily to industry peers. We have seen that forest owners and forest companies did not accept the notion that they ought to be accountable to outside stakeholders who, in their opinion, have limited experience, inadequate knowledge of the challenges in the forestry sector, and no mandate to regulate. As a result, the producer-backed programs initially operated under the strongly held belief that those who are required to comply with forest management standards ought to be accountable to their peers, and not to environmental stakeholders (cf. Cashore, Auld, and Newsom 2004). Determining who ought to be accountable to whom and for what should be understood, then, as a struggle among stakeholders about how to establish accountability arrangements. The emergence of FSC competitors highlights the necessity of a sense of ownership of certification schemes among producers (i.e. forest owners and forest companies). Forest companies and landowners that rejected FSC certification did not contest the idea of accountability, but because they did not trust or approve the FSC-style governance model, they decided to develop a different model.

Notwithstanding the two different governance models, producer-dominated schemes have, over time, imitated some of the organizational arrangements in the FSC-style model (Article 2). We have seen that producer-backed schemes have constituted themselves more or less independent of the producer associations that established them. The have also become increasingly open to participation from stakeholders outside the forestry community. Over time, we see evidence of some degree of convergence and institutional isomorphism in the certification field – the tendency toward organizational homogeneity. Recall from Chapter 1 that homogenization within organizational fields is a result of

coercive isomorphism, mimetic processes, and normative pressures (DiMaggio and Powell 1983). In the cases of forest and fisheries certification, we have observed all three processes at work. Coercive isomorphism has resulted from pressures from environmental NGOs and preferences for particular organizational forms from donors, charities, and philanthropic foundations. The preferences of funding bodies for FSC, MSC, and similar schemes have been crucial to the growth of these organizations and to the construction of a certification organizational field (Bartley 2007). Mimetic processes occur when a number of organizations imitate a specific organizational model that is considered to be particularly legitimate and successful. We have seen that the success of FSC in attracting widespread support among market players and NGOs has helped to spread the FSC-style governance model, which in turn is legitimated by widely held norms and beliefs about appropriate ways of organizing rulemaking and governance in modern society. In addition, normative pressures occur as professionals occupy similar positions across a wide range of organizations and introduce their occupational principles, norms, and values in those organizations. This process is perhaps most apparent in the entire sub-sector of auditing activities that did not previously exist. Certification bodies that audit forests and fisheries are occupied by professional auditors with similar educational background and value systems. These auditors introduce their occupational principles and practices in certification bodies, whether they audit the operations of producers certified by MSC in the fisheries sector or FSC and FSC's competitors in the forestry sector. We can observe, then, that certification schemes are embedded in particular organizational fields and molded by institutionalized norms and values in those fields.

I have argued, however, that several producer-dominated schemes have adopted fashionable organizational recipes to deflect negative attention and criticism rather than to enhance responsiveness to critics (Article 2). Consultation with environmental groups, for example, could be a way of justifying one's actions, yet not being answerable to anyone but industry peers. By adopting certain organizational arrangements, such as consultation in decision-making processes, standard setters can tell their critics that their decision-making procedures are "open", "democratic" and "transparent". I have argued that procedural accountability arrangements could be used to conceal actual power structures and deflect criticism. Answering only those questions that the answerable party has decided upon could

become a meaningless ritual of conduct justification. Accountability requires not only that some party asks questions, but also that the responding party recognizes the one making the inquiry as being in a position of authority and having a right to ask questions and demand answers. In addition, much of the debate about accountability mechanisms tends to reduce accountability to questions about improving systems of management and auditing. Enhancing accountability solely through expanded monitoring and auditing could, in the worst case, become circular and empty of content and could amount to little more than procedures and rituals to meet expectations about appropriate conduct (Power 1997; Garsten and Boström 2008).

In early neoinstitutional work, organizations are said to reflect, but never to transform, institutionalized norms and values in the environments in which they are situated. From this perspective, formal structure is seen as "myth and ceremony" (Meyer and Rowan 1977) that merely tend to reproduce overarching metanorms and powerful value orientations. My studies support more recent institutional work demonstrating that organizations transform institutionalized norms and innovate to create institutional change (e.g. Sahlin-Andersson and Engwall 2002). Producer-backed schemes have mimicked the FSC-style organizational model by enhancing their autonomy and openness to other stakeholders, but have acted strategically to maintain control of the standard-setting process. Rather than passively absorbing popular organizational recipes, they have adapted selectively to institutionalized norms and values by adopting certain recipes while carefully filtering out the management prescriptions of which they did not approve. Indeed, producer-backed and NGO-backed schemes are struggling to craft the appropriate norms, rights, rules, and decision-making procedures in the certification organizational field. Whereas environmental NGOs typically have invoked norms and beliefs about stakeholder democracy, deliberation, and transparency in institution-building processes, forest owners have invoked norms and value orientations related to their sense of independence and identity as stewards of their forests. Institution building should be seen, then, as a struggle between competing sets of norms and value orientations, with no predetermined outcome (cf. Conca 2006). Non-state governance institutions developed in part through collaboration between environmentalists and producers and in part through contestation among actors who wanted the institutions to serve to advance their values, beliefs, or interests.

In conclusion, the empirical material shows that institutional environments influence but do not fully determine formal structure in certification schemes (Article 2). There is scope for agency and transformation of underlying normative structures in the certification field. We have seen that certification schemes have causal autonomy and that they are not merely a reflection of configurations of power and interests among stakeholders or broader social orders. On the other hand, it is important to recognize that organizational recipes and institutionalized norms and beliefs limit the range of available options in the certification field, requiring standard setters to choose among a limited range of acceptable or appropriate organizational forms.

2.3 Organizing the science-policy dialogue

Understanding and addressing complex environmental problems require credible knowledge about their causes, consequences, and possible solutions. Scientific knowledge can be assumed to constitute a platform for negotiating standards, but standards cannot simply be derived from knowledge. All standard-setting processes are likely to involve discussions among stakeholders about the credibility of particular knowledge claims, the knowledge that should be included or excluded in the process, and the implications of knowledge for rule setting. I expected that the influence of particular knowledge producers and users in standard-development processes is likely to depend on the organization of the science-policy dialogue. One of the case studies (Article 5) investigated the influence of competing knowledge producers in Swedish and Norwegian forest certification and public policymaking processes. Whereas traditional public policymaking processes have been dominated by national forestry authorities and specific forestry research communities, NGO-backed standard-setting processes have been both inclusive and stakeholder owned. I described public policymaking as *hierarchical* systems (March and Olsen 1989), in which the national forestry authorities have controlled participation (Article 5). The authorities granted privileged access to the rulemaking processes to members of the traditional forestry research community, who are located at national forestry universities and institutes. Competing knowledge producers, particularly biologists and environmentalists operating outside the traditional forestry research community, had little access to these processes, especially in Norway. By contrast, NGO-backed standard-setting systems could be

characterized as *loosely structured* systems (March and Olsen 1989) with few formal or practical barriers for actors who seek to provide scientific input. Scientific knowledge was considered a legitimate and authoritative source of reference by all stakeholders, and served to build compromises and consensus among them. To be sure, stakeholders often presented competing knowledge claims, but they usually trusted scientific research and agreed that science should play a prominent role in the standard-setting process.

Scientific experts, forest owners, environmentalists, and other stakeholders engaged in *coproduction* of knowledge in standard-setting processes. The Norwegian Living Forest working group produced a number of reports to facilitate knowledge-based standard development for key issue areas (protection of old, large trees and dead wood, harvesting methods, forest area protection) and reported results from research and development (R&D) projects such as harvesting method test areas. The Swedish FSC working group did not initiate R&D projects, but involved experts in the standard-setting process. Some of the environmental NGO representatives were biologists who had previously worked for the forest companies and had arranged training courses in forest ecology. They frequently referred to scientific reports and recommendations to substantiate proposals for strong environmental protection measures. The forest industry representatives conceded to the pressure for stringent set-aside requirements in the FSC standard, but rejected other proposals from the environmentalists, claiming that the scientific evidence of ecological impacts was inconclusive. Although the environmentalists invoked the precautionary principle in the negotiations, the industry representatives maintained that any provision in the standards that would change or restrict forestry practices should be based on firm scientific evidence and facts.

Despite having different interests, we have seen that the parties were able to handle scientific uncertainty and resolve controversies in the standard setting process in three ways. (1) They agreed upon standards that provided direction for forestry operations, while allowing forest owners some flexibility and discretion in applying the rules. (2) In cases of disagreement on the state of knowledge and implications for forestry operations, they referred to "further research" and the need to adapt standards in light of new evidence on the environmental effects of forestry operations. (3) To allow for adjustments, they agreed that all standards should be renegotiated after the first five years of operation. By referring

to further research, allowing for some discretion in the application of rules, and creating organizational procedures for adjustment of rules, the parties were able to manage knowledge uncertainty and agree upon standards (Article 5).

On the other hand, the scientific basis of the agreed-upon standards was not always clear. Considerations about the costs and feasibility of implementing, monitoring, and verifying compliance with standards were sometimes thought to be more important than the state of knowledge about environmental protection needs. In the Swedish FSC standard development group, for example, the forest industry representatives rejected requests from the environmentalists to prohibit the introduction of exotic species and to ban the use of chemical fertilizers and pesticides in forestry. Although they argued that the scientific evidence of ecological impacts was inconclusive, there is little doubt that the forest industry representatives also considered economic issues.

To summarize, economic considerations limit the scope for agreement and the range of feasible solutions, but the organization of the science-policy dialogue clearly matters as well. The Norwegian and Swedish cases show that the influence of knowledge depends upon the process by which it is created and, in particular, upon *access* to the science-policy dialogue. It seems that science has a greater chance of overcoming economic interests and guiding action in inclusive, deliberative, rulemaking processes than in processes dominated by particular interests and groups. As seen in the Swedish and Norwegian standard development groups, a process of coproduction of knowledge between various knowledge producers and stakeholders could create trust, produce policy-relevant knowledge, and facilitate agreement on appropriate rules.

3. The effectiveness of certification schemes

3.1 Causal mechanisms and behavioral pathways

FSC arose because of the lack of substantive results from intergovernmental collaboration on forest policy. Its principles are not explicitly linked to any set of regional criteria and indicators or to any intergovernmental forest policy principles, because FSC seeks to provide stricter and more demanding forest management rules than those agreed upon by governments. In contrast, we have seen that the MSC standards are based upon the 1995

UN Food and Agriculture Organization (FAO) Code of Conduct for Responsible Fisheries. This is clearly an attempt to reassure governments that MSC does not seek to establish a competing non-state regime to the elaborate international fishery regime, centered on the 1982 Law of the Sea Convention. A wide range of multilateral, regional, and bilateral fishery treaties as well as international soft law (such as the FAO Code of Conduct) supplement the ocean law codified in the Law of the Sea Convention. MSC operates within this regulatory framework.

The divergent roles of FSC and MSC are related to different ways in which forests and fisheries are governed (Articles 1 and 2). Forests are national resources governed by domestic authorities and owners. Although states own three-quarters of the world's forests, most governments have transferred management authority to private companies through logging concessions. National laws regulate access to and use of forest, but forest companies and private owners are often given great leeway to exploit forestland, and lack of forest law enforcement remains a major problem, particularly in developing countries in the tropical zone. Forest certification schemes could directly influence the way forest companies and landowners manage forests and conduct logging operations.

In contrast, marine fish stocks are common pool resources managed by governments through international collaboration arrangements, and there is little scope for private authorities like MSC to influence multilateral fishery management rules. Whereas FSC seeks to establish a global standard for well managed forests in the absence of multilaterally agreed-upon forest law, MSC essentially aims to enhance compliance with existing multilateral and domestic fisheries rules and to improve fisheries management practices through performance-based standards and third-party auditing. Because most fisheries are under the control of governments, fish stocks require government intervention for their conservation. Certification bodies may identify regulations that need to be changed to allow for certification, but it is not their task to appeal to governments to change management regulations. Rather, the applicant (fishing industry or other stakeholders) may work with government regulators to change regulatory frameworks in ways that would allow certification of fisheries that do not meet MSC standards (Leadbitter, Gomez, and McGilvray 2006). Likewise, if governments believe that certification is vital for the economic viability and market access of the fishing industry, they may take the initiative to

change management rules to allow for the certification of fisheries. Compatibility between government regulations and the standards set by the certification scheme may facilitate certification of applicants. In addition, by requiring transparency in the fishing industry and increasing control over fishing practices, certification could enhance compliance with government regulations and improve management practices.

I have argued that understanding the influence of fisheries and forest certification schemes on behavior requires the identification of causal mechanism and mediating behavioral pathways. All studies point to the interaction or interplay between a "logic of consequences" and a "logic of appropriateness" – the interplay between rational calculative considerations and the internalization of certain principles, norms, rules, and procedures about acceptable and appropriate conduct in particular roles or situations. We have seen that actors' perceptions, knowledge, or commonsense may change with learning and with the internalization of certain environmental principles, norms, rules, or claims about reality. Certain claims are now taken as unarguable facts; that overfishing or clear-felling forests have damaging environmental effects, for instance. Such effects may then be interpreted normatively (unacceptable/inappropriate) or strategically (bad for business). In particular, the internalization of certain principles and norms related to sustainable fishing, marine protection, forest protection, and biodiversity conservation among experts, governments, laypersons, and market actors have increased the cost of irresponsibly breaching those principles and norms. Producers responded strategically to the spread and increasing salience of such principles and norms by adopting certification standards to avoid NGO targeting and boycotts, to protect their reputations, and in some cases to reap market benefits.

The case studies on forest certification indicate, however, that what originally were clearly utility-maximizing adaptations to new norms, principles, and market expectations, have, over time, resulted in some degree of learning and internalization of certain environmental protection norms among producers. Repeated interaction in organized networks such as the Swedish FSC and the Norwegian Living Forests working groups have built mutual trust, common expectations of what is right and proper conduct, and the internalization of certain norms and rules. Forest owners' adaptations to new norms and expectations seem to have moved through phases, from rational-calculative-based

considerations to the internalization of certain new norms and rules for the acceptable or appropriate conduct of responsible owners. The emergence of new environmental principles and norms and their institutionalization through collaboration in standard development groups and certification systems have contributed to the redefining of forest owners' interests and the boundaries of acceptable or appropriate behavior. Rather than treating interests as exogenous, this thesis has confirmed the assumption that interest may change or even be discovered as a result of social interaction and learning processes.

The empirical material also indicates that what is considered appropriate has changed as participants in certification projects have moved from the early stages of initiation, through collaboration in standard development groups, to the highly institutionalized and advanced non-state governance systems currently in operation. For many private forest owners, appropriate behavior has traditionally constituted responsible management of the forests and the bequeathing of the forests to their children and grandchildren to be managed in the decades to come. When the certification issue first emerged, these forest owners were highly critical, objecting in principle to outsiders telling them how to manage their forests. Their opposition to the FSC was based not solely upon the stringency of the FSC standards, but also upon the groups that were supporting the FSC (Cashore, Auld, and Newsom: 2004: 234). As we have seen, this opposition to the FSC helps to explain the formation of producer-dominated schemes in Norway, Sweden, and elsewhere. Over time, however, it seems that forest owners have accepted some degree of public scrutiny and accountability to outside stakeholders. In general, most forest owners now seem to accept environmental protection as a legitimate objective, and realize that they need to respect specific environmental considerations in forestry operations. That said, the studies also show that when forest owners' identity as the steward of their forests was challenged or threatened, they mobilized to defend that identity, as seen in several post-certification conflicts among participants in standard development groups in Norway and Sweden.

The upshot is that both rational calculative considerations and considerations about acceptable or appropriate behavior are usually at play in social processes, but one may take priority over the other, depending on the situation or circumstances (cf. Bernstein and Cashore 2007). In general, forest owners now seem to consider certain environmental

protection measures in forestry as being appropriate, but we have also seen that the "logic of consequences" continues to play an important role in forest management decisions. Private forest owners are also influenced by a desire to maintain their independence and a strongly held belief that they know best how to mange the forests (Cashore, Auld, and Newsom 2004), indicating that what is considered appropriate behavior in a particular situation or role may be ambiguous (Christensen and Røvik 2002). In some situations, forest owners may regard compliance with certification standards as the appropriate action, whereas in other situations, forest owners' considerations about compliance may be trumped by a desire to maintain their independence and mange the forests as they always have done. The desire of private forest owners to remain independent seems, in turn, to be strongly related to their identity as forest owners. When forest owners feel that their identity as the steward of their forest is at stake, they will ask themselves: "What is appropriate behavior as a forest owner in this situation?" rather than "What do the certification rules say to do in this situation?" There is not merely one "logic of appropriateness", then, but several partly competing "logics of appropriateness" that can pull in different directions.

3.2 Problem-solving effectiveness

What can be said about the effectiveness of forest and fisheries certification schemes as institutions of environmental governance? An institution of environmental governance can, as I have noted, be considered effective if it solves or alleviates the problem that motivated its creation. This problem-solving approach to assessing effectiveness has been operationalized as the degree to which forest certification modifies on-the-ground practices in ways that reverse or alleviate environmental deterioration in forestry, and the degree to which fisheries' certification changes fisheries practices in ways that stop overfishing, depletion of exploited fish stocks, and unsustainable fishing practices. Ideally, this research strategy involves investigating not only changes in forestry and fisheries practices, but also the causal relationship between adopting sustainability standards and those changes. Having identified certain changes in resource management practices following certification, we need to determine the *relative improvement* caused by certification, as compared with what would have happened without certification. In this study, however, the ambition has

primarily been to identify the conditions that facilitate or impede problem-solving effectiveness rather than to examine on-the-ground changes of management practices following certification. I have examined the stringency of the certification standards and the effects of third-party auditing, based on the assumption that the ability of certification programs to improve environmental performance depends, in part, on the stringency of sustainability standards and the level of compliance with those standards. I have also examined producer participation in certification schemes, based on the assumption that a critical mass of producers is necessary to change widespread producer practices in ways that result in environmental amelioration. Because producers self-select into certification schemes, I have argued that it is crucial to consider not only the proportion of certified producers, but also participation patterns.

Most certification schemes in forestry and fisheries are based on some combination of system-based and performance-based standards, but they place different weight on these different types of standards. FSC in forestry and MSC in fisheries are primarily based upon performance standards, criteria, and indicators, although they also contain some management system elements. Compared to FSC, the producer-dominated schemes tend to place greater weight on standards of procedure, organizational and management measures, and flexibility in applying sustainable forest management standards. Environmental NGOs have repeatedly criticized producer-backed schemes for having ecological and social standards that are too discretionary and lenient. Indeed, in many regions and on several key environmental and social issues, FSC seems to be more demanding than producer-dominated competitors. There is significant variation, however, in the stringency of the producer-dominated schemes. Whereas some producer-backed schemes take an ecosystem-based approach to forest management, others emphasize the improvement of forest productivity and yield (Article 3). Similarly, regionally developed FSC standards vary considerably in their environmental and social rigor, primarily because of the multilayered governance approach to standards development. We have also seen that standard setting is a dynamic and iterative process, and that certification schemes influence each other. As a result of competition with FSC and mutual recognition efforts, the Swedish PEFC standard has increased its level of stringency since its inception, almost to the level of the Swedish FSC standards (Article 6). Nonetheless, some basic differences between environmental

NGO-backed and producer-backed schemes are likely to persist. As noted earlier, FSC's credibility among environmental NGO supporters and in important markets rests on its being the most demanding program in the forest certification field. Certification schemes like FSC, which seek to set relatively high standards while simultaneously attracting broad-scale participation, are involved in a delicate balancing act in attending to the needs and expectations of their various stakeholders.

I expected that regular third-party auditing of management practices would result in improvements in forestry and fisheries practices. Although certification bodies are entrusted with a great deal of power and discretion, requirements regarding transparency and opportunities for stakeholder participation in certification and complaints proceedings, control mechanisms, and stringent standards work to hold them and the producers they certify accountable to both the standards organizations and outside stakeholders. These structures tend to be better developed in multi-stakeholder certification schemes than in those dominated by business and industry interests (Article 2). The stringency of FSC and MSC standards and the transparency of the schemes facilitate credible auditing. When performance-based schemes such as these are audited, the forest or fishery itself is assessed. A certifier's inspection may determine if a forest landowner has set aside old-growth forest of a certain size, for example, or if a fishing vessel uses appropriate fishing gear and practices. When system-based standards are audited, it is not the forest or the fishery that is assessed, but the forest or fishery management system. System-based standards are frequently criticized by environmental groups because, in principle, compliance can be verified without a visit to the forest or the fishery. Consequently, FSC can be said to have a greater *capacity* to change forestry practices in ways that could reverse environmental degradation in forests than do many of its competitors.

Looking at evidence of *actual* behavioral changes following certification, we see that forest companies and landowners that certify have had to change their management operations (Articles 4 and 6). Studies of Corrective Action Requirements issued by certifiers show significant attention being paid to improvements in internal monitoring and auditing in forest organizations. These studies also indicate that forest organizations have had to attend to ecological aspects of their management more carefully following certification. It seems to be a warranted conclusion, then, that forest certification has

resulted in changes in on-the-ground management. But we still know too little about the environmental impact and efficacy of forest certification as a problem-solving instrument. Neither do we have evidence about differences in the on-the-ground impact of FSC and FSC competitors. These are areas in urgent need of closer examination.

Turning to adoption patterns, we have seen that there are challenges related to self-selection in voluntary certification programs; when standards are high, only some companies and landowners are willing to or have the capacity to participate. In order to be effective, forest certification programs need participation from a critical mass of companies and landowners. Participation from a few industry leaders could set an example for the rest of the industry, but if most companies and landowners reject certification, there would be no broad-scale change of forestry practices. An examination of adoption patterns around the world show that certified lands are skewed in favor of temperate and boreal forests, indicating that forest certification has spread primarily among producers who face relatively low adoption costs (Article 3). Patterns of adoption also show that producer-backed schemes have outperformed the FSC in many countries and regions; by the end of 2007, they had certified 5.2 percent of the world's forest, whereas the corresponding figure for FSC was 2.4 percent (Auld, Gulbrandsen, and McDermott 2008). The wider producer acceptance of the PEFC is an indication that producers tend to prefer participation in schemes with less stringent and prescriptive standards than FSC offers. But the character of the forest operation and the producer evaluations of legitimacy also influence adoption choices. Whereas the large Swedish forest companies chose FSC certification, nonindustrial forest owners in both Norway and Sweden opted for PEFC certification, in part because they regarded FSC as being geared toward industrial forestry and unsuited for the certification of small-scale, nonindustrial forestry. This pattern of adoption indicates that whereas nonindustrial owners may reject relatively stringent standards because of the high fixed costs of preparing for and responding to certification audits, large companies can afford to participate because of the benefits of economies of scale. Accordingly, certification schemes may have consequences – such as favoring large-scale over small-scale forestry – that were *not intended or anticipated* by those who created these schemes.

In sum, there is clearly a dilemma in setting stringent standards that would compel producers to undertake reforms they otherwise would not pursue, while simultaneously

ensuring broad-scale participation. Although a few certification frontrunners could adopt stringent standards at a relatively low cost and obtain a competitive advantage in markets that value certified wood, the majority of producers will have to be convinced of the benefits of participation or coerced into adopting standards by activist targeting and campaigns.

4. Concluding remarks and directions for further research

Certification schemes have emerged in recent years to become innovative and dynamic institutions for non-state environmental governance. This thesis shows that an understanding of patterns of emergence is fundamental to an assessment of the effectiveness of certification schemes. Given that producers self-select into certification schemes, one must account for adoption decisions in order to understand these patterns. We have seen that adoption decisions are influenced by the nature of the certification scheme, NGO pressure to certify, dependence on export markets, industry structure, and government support. Data on adoption patterns around the world show that forest certification has spread primarily among producers in developed countries who may face relatively low compliance costs. Similarly, we have seen that certification has proliferated among fisheries in Europe and North America, but not in developing countries. Patterns of adoption continue to raise questions about the effectiveness of certification initiatives. More research is needed on the economic, political, and social factors that facilitate or hinder the spread of certification initiatives in developing countries.

Following the proliferation of private governance arrangements, some scholars talk of a "crowding out" of traditional command-and-control instruments and public policies. This study shows that non-state certification schemes in the forestry and fisheries sectors tend to *supplement* rather than *supplant* international and domestic regulations. This finding is consistent with recent comparative studies of the spread of "new" environmental policy instruments, such as eco-taxes, voluntary agreements, and eco-labels (cf. Jordan, Wurzel, and Zito 2003). The case studies show not only that certification schemes are affected by public regulations and national policy styles or administrative cultures, but also that they influence public policy making and enactment. Because forest certification schemes require adherence to national laws and regulations, they may strengthen compliance with

environmental laws and provisions – where such regulations exist. By conducting annual field inspections in selected areas, certification bodies can, to some degree, verify conformity to both private and public environmental protection rules. On the other hand, considering the limited capacity of public authorities to control forestry operations, field inspections of forestry operations may be left increasingly to private certification bodies and their annual audits. Developments in Sweden and Norway suggest that private authorities may gain influence at the expense of public authorities such as forestry administrations and local municipalities. As noted in one of the case studies (Article 4), that is not say that demands on and control of forestry operations are weakened, but that regulatory systems change with private actors accepting more responsibility for rulemaking and compliance verification.

States have, in general, been more skeptical about certification schemes in fisheries than about certification schemes in forestry, primarily because of differences in the way the two resources are governed. Through the development of prescriptive and detailed fishery eco-labeling guidelines within the FAO, states have even taken steps to regain control of rulemaking in the fishery sector. Thus, it is clear that states with a significant stake in fisheries governance are not willing to leave the creation of labeling rules and procedures completely to the discretion of non-state actors, and they are able to regain some control over non-state rulemaking. In recent years, however, there seems to have been a shift among governments away from skepticism about MSC and toward acceptance of fisheries certification as a helpful supplement to international fisheries regulations and national policies.

All articles in this thesis focus on the ongoing reshaping of rulemaking authority through the proliferation of transnational governance schemes, based on the support of firms, NGOs, and consumers, rather than on traditional state sovereignty. The state no longer has exclusive policy-making authority, but shares that authority with non-state bodies that seek to fill the policy void where states have been unable or unwilling to provide governance. Unlike the predominant view in the global governance literature, however, my research shows that the state influences non-state rulemaking projects and remains a critical actor in the successful implementation of non-state governance schemes. The spread of new instruments and modes of environmental governance is evidence of a

process of state, market, and civil society transformations and "governance *with* government", rather than a "retreat of the state" and "governance *without* government".

It is critical to recognize, then, that private and public rulemaking processes are closely intertwined; that private regulatory regimes influence public regulatory regimes, and *vise versa*; and that the absence of one affects the dynamics in the other. The process of private and public institution building is part of a broader effort to address collective problem complexes. More research is needed on the combined effects of certification and governmental, intergovernmental, and civil society efforts to address urgent sectoral problems like deforestation and overfishing. In a similar vein, the role of certification as an integral part of initiatives to address inter-sectoral problem complexes such as loss of biodiversity, land use change, and climate change, is a challenging area for future research.

With respect to macro-level institutional interactions, a critical area of study is the effect of the evolving certification field on the policies of multilateral institutions such as the international trade regime. Several studies have examined the ways in which international trade law may hinder the spread of certification and eco-labeling schemes. Although existing international regimes may constrain certification efforts, certification schemes could also influence governance efforts in these regimes by setting benchmarks and standards for good practice. This area remains a critical one for future research on the institutional interactions between private and public governance efforts.

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